

South African Asset Manager Perceptions on the Integration of Climate Change Risks into Equity Investment Decision-Making Processes

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Abstract

The growing interest responsible investing strategies driven by bodies such as the United Nations Principles for Responsible Investing Initiative has resulted in issues such as climate change and its impact on investment portfolios becoming part of the asset management industry discourse. However, the degree to which these issues are perceived by asset managers to be significant has not been expanded upon extensively in literature. This study was undertaken to evaluate South African asset manager perceptions regarding the integration of climate change risks within equity investment decision-making processes. The study was further aimed at providing an understanding of preferred methods of climate change risk integration, where integration does take place, and the perceived barriers to integration within the South African Asset Management industry.

To achieve the above-mentioned aims, an online survey of South African asset managers was conducted. The questions in the survey comprised a combination of open ended and closed ended questions with Likert and ranking scales being used. The data which was both quantitative and qualitative in nature was analysed using descriptive statistics and thematic analysis methods involving the identification of trends.

The findings reveal that most asset managers consider climate change risks to be important to their investment portfolios and that the majority of them do integrate this risk within their equity investment decision making processes. The methods of integration, however, do vary, with asset managers preferring not to use screening and sustainability products but rather incorporating climate change risks using methods such as discounting and also making use of a combination of methods. It was found that the most significant perceived barrier to climate change risk integration within equity investment decisions relates to the difficulty in quantifying climate change risk. The overall perception was that asset managers are not optimistic regarding the lifting of the most significant barriers to climate change risk integration, the implication of this being that more needs to be done to make integration easier.

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I dedicate this work to God, who makes all things possible.

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Acronyms and Abbreviations

ASISA	Association for Savings and Investment in SA
BEE	Black Economic Empowerment
CalPERS	California Public Employees' Retirement System
CRISA	Code for Responsible Investing in South Africa
DEA	Department of Environmental Affairs
ESG	Environmental Social and Governance
FAO	Food and Agriculture Organization of the United Nations
GEPF	Government Employees Pension Fund
IODSA	Institute of Directors in Southern Africa
IPCC	Intergovernmental Panel on Climate Change
PRI	Principles for Responsible Investment
SRI	Socially Responsible Investment/Investing
UNICEF	United Nations Children's Fund
UNEP	United Nations Environment Program
UNPRI	United Nations Principles for Responsible Investment
WEF	World Economic Forum

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Chapter 1

Introduction

1.1 Background and Context

There is growing interest in the area of Environmental, Social and Governance (ESG) factor integration into investment decision-making within the global asset management community, (Gitman et al 2009; van der Ahee and Schulschenk 2012). ESG considerations are no longer perceived to be merely ethical considerations but a business case for ESG consideration has also emerged, (Richardson 2008, cited in Halvorssen 2010). This gradual shift has led to an increased recognition of the importance of mitigating against the negative economic impacts of issues such as climate change in long-term investing, (Baue 2005, cited in Halvorssen 2010). There exists a challenge for the investment community to respond to the science on climate change in a manner that incorporates its social, political and economic impacts and thereafter consider appropriate actions to take in view of their analysis, (Covington and Thamotheram 2014). Understanding the perceptions, therefore, of asset managers regarding climate change related risks affecting the portfolios that they manage is important. This is because perceptions will drive asset manager reactions to climate change risks which will ultimately have an effect on long-term investment performance. Perceptions can also contribute towards the creation of barriers to the integration of ESG issues such as climate change, (Amaeshi and Grayson 2009).

The integration of ESG issues within investment processes has gained prominence as a result of the heightened awareness of risks post the Enron, WorldCom, Tyco, Parmalat and other corporate governance scandals which resulted in declining confidence in financial numbers and sparked an interest in new methods of financial analysis, (Kiernan 2007). A more incorporative investment process

which integrates financial and extra financial risks is increasingly being seen as a method of improving valuation accuracy.

Climate change having been described by (Stern 2007) as the greatest market failure the world has ever seen, has emerged within the context of an advancing global discourse on ESG integration to be considered as a factor worthy of isolated integration within investment decision-making processes. This as awareness within the investment community regarding the potential negative impacts of climate change has also increased, (Solomon et al 2011). According to the (Ceres 2010, p.7) Survey of Asset Manager Practices, "Climate change is, for many companies, a clear material risk. As companies begin to acknowledge and proactively manage these risks, investors and their asset managers must seriously consider climate risks as part of their due diligence review of their investments." Increased debate on the divestment from fossil fuel companies has also demonstrated that there is some discourse within the investment community on the issue of climate change, however more needs to be done if the long term risks on investment portfolios associated with climate change is to be avoided, (Covington and Thamotheram 2014).

The discourse relating to the importance of climate change has increased both globally and regionally. Regionally, Africa is considered to be vulnerable to climate change risk as a result of its vast drylands, with approximately two thirds drylands expanding across the area, (O'Brien and Leichenko 2000). (Hope 2009, p.455) highlights the vulnerability of Africa's agricultural sector to climate change which alone amounts to the "single largest economic activity on the continent". The impact that climate change would have on the fisheries industries is also highlighted by (FAO 2008 cited in Hope 2009).

Some authors highlight the particular effect that climate change would have on impoverished regions, (Tol 2009; Dell et al 2008; World Bank 2009, cited by Hope 2009). (Hope 2009) states that regions that are already facing widespread poverty within their communities, such Africa, will be the ones most affected by climate change. According to (Tol 2009) a possibility is that as a result of climate change, low income countries would become even poorer as a result of their limited ability to adapt to the effects

of climate change. (Dell et al 2008) that found that a slower growth of the annual growth rate of poor countries by 0.6 to 2.9 percentage points would result from climate change effects.

South Africa like the rest of the continent faces risks associated with climate change. The dire impact that climate change would have on the South African agricultural sector through changes in precipitation, temperature, carbon dioxide, fertilization, climate variability, and surface water runoff, (Calzadilla et al 2013) makes this sector vulnerable to the climate change phenomenon.

Sectors contributing to climate change are also vulnerable to the various cost implications arising from their business operations. Sectors such mining, petrochemicals and building and construction are the biggest contributors to climate change in South Africa, and as such, are at risk of being subjected to reductions targets through taxes, legislation and sanctions, (IODSA 2010).

The infrastructural impacts that climate change could have through increased rainfall would have wide reaching economic impacts in South Africa, (UNICEF 2011). According to (UNICEF 2011) drainage systems in several of South Africa's industrial areas are above capacity levels. The migration from dry and less hospitable regions on the country would lead to a strain on resources in the economic hubs where people migrate to, (UNICEF 2011). The resource strain would affect business operations and ultimately the investment returns of the portfolios invested in these businesses.

Climate Change introduces physical, regulatory and legal risks for companies, (Halvorsen 2010). The resultant impact on asset values and the performance of companies will mean that the portfolios investing in these assets and companies will also be impacted by climate change risks, (Stewart and Brimble 2009). Asset Managers investing in the shares of companies affected by these risks would need to be aware of their associated potential portfolio impacts. Climate Change, is one of the biggest environmental issues that companies face and is therefore of significance to financial markets, (Bassen and Kovaks 2008).

South African Asset Managers have also become involved in the climate change risk integration and global climate change discourse. Investec Asset Management, in their 2011 study on Climate Change and its Impact on Shareholder Value, suggest that the altering of the climate and initiatives aimed at limiting the effects of these changes would have a deep effect on equity markets. In the study, Investec Asset Management also highlights the importance of understanding risks such as climate change in order to minimize risks and enhance long-term benefits within their investment portfolios.

Asset manager perceptions on climate change risks are important since asset managers as universal owners have an interest in the long-term prosperity of the broader economy making it possible for them to offer a balanced perspective to the movement towards decarbonisation, (Mansley and Dlugolecki 2001 cited in Dlugolecki and Mansley 2005). They can also use their dominance within the equity market to drive corporate strategy regarding climate change, (Mansley 2000). Universal Ownership is defined by (Kiernan 2007) as the phenomena whereby large institutional investors hold investments across a wide range of asset classes and geographical regions to the extent that they become owners on the “entire global economy”. Since universal owners have an interest in the health of the broader economy, (Carbon Trust 2005; Kiernan 2007), externalities such as climate change which have an impact on the broader economy, (Kiernan 2005; Northrop and Sassoon 2006, cited in Calvello 2009) would be of importance to universal owners, (Carbon Trust 2005). According to (Seitchik 2007) cited in (PRI Association and UNEP Finance Initiative 2011) *“a portfolio investor benefiting from a company externalising costs might experience a reduction in overall returns due to these externalities adversely affecting other investments in the portfolio, and hence overall market return. For a diversified investor, there is no place to hide from these costs: they come back into the portfolio as taxes, insurance premiums, inflated input prices and the physical cost of disasters.”* The perceived importance of climate change risks by asset managers could, depending on their approach to incorporating these risks, have a bearing on the extent to which potential impacts of climate change can be avoided across the broader economy.

Research on perceptions on the integration of environmental factors, including climate change, within investment decision-making processes has been limited, (Viviers et al 2009, cited in Giamporcaro et al

2010). (Giamporcaro et al 2010) conducted a study on environmental considerations within responsible investing practices and found that within most South African SRI Strategies, environmental issues were not much of a concern. Having observed the lack consideration of environmental issues within the asset management industry, (Giamporcaro et al 2010) highlights the linkage between current financing and investment decisions and the landscape on which South Africans spanning across varied socio-economic backgrounds will have to reside for “years to come”. The manner in which the asset management industry responds to environmental issues is therefore important since over the long term the impact of these responses will be felt.

Traditionally, South African Asset Managers have integrated ESG risks into investment decision-making using positive screening strategies which focused on Black Economic Empowerment (BEE), Employment Equity, Corporate Social Investment Initiatives and Social Infrastructure Development projects such as road construction and electrification. Negative screening strategies have been oriented around the application of Shariah or Islamic Law Principles, (Viviers et al 2009 cited in Giamporcaro and Pretorius 2012). Active shareholder engagement is also used to integrate ESG risks, (Giamporcaro et al 2012). According to (Giamporcaro and Pretorius 2012), there is a small group of funds that have focused on a wider scope of ESG screens that include environmental screens.

The South African investments industry also comprises asset managers that implement strategies whereby a broad integration of ESG integration is conducted with the aim of optimizing performance, (Giamporcaro and Pretorius 2012). According to the authors this form of responsible investing has been driven South African pension funds industry that has recognized the potential impact that ESG issues could have on long-term returns on portfolios.

The integration of ESG factors within investment decision-making does however present challenges, the first being that which is related to a lack of broadly accepted terminology, (Business and Sustainability Development: A Global Guide 2007 cited in Herringer et al 2009). According to (Herringer et al 2009), South African authors (Wierzycka 2004; Heese 2005:729; Du Preez 2005:32) have made the call for terminology to be clarified. The use of short-term oriented benchmarks has been another

hindrance to the advancement of responsible investing practices that has been suggested, Mainstream Responsible Investing, cited in (Herringer et al 2009).

A lack of regulatory support has also been suggested to be hindering the integration of ESG factors into investment decision-making processes. According to (Bornochis and Healing 2005 cited in Herringer et al 2009) despite the broad support for the rules governing pension funds being amended to incorporate SRI, South Africa is not at the stage whereby advantage of SRI allocations would be utilized. According to (Healing 2005, cited in Herringer et al 2009) the gap in legislative clarity is adding to the challenges associated with SRI strategies. The author argues the current status likely to remain in place for as long as there is no guidance being provided to the pension fund industry.

The existence of a skills gap amongst South African Investment Analysts and Asset Managers has been suggested by some experts to be one of the factors blocking the progression towards ESG integrative investment decision-making processes, (Viviers 2007:197, cited in Herringer et al 2009).

Since a gap in studies has been identified relating to environmental risk factors and climate change risks in particular and their integration within investment decision-making processes, this study seeks to increase the coverage of such issues by providing insight into perceptions of South Africa asset managers whose responsibility is to make such considerations. The focus on equity investment decision-making processes that is applied in this paper will contribute towards a deeper level understanding of the processes applied regarding climate change risk specifically and with respect to an asset class where long-term investment decision making is crucial. In addition to a broad study of the perceptions of asset managers regarding climate change risk integration, insight into perceived barriers to integration forms part of the study, providing an additional layer.

South African businesses are faced with climate change risks and the asset management industry that invests in these businesses would need to consider any risk, including climate change that could affect the long-term investment returns of their portfolios, if superior returns are to be achieved.

1.2 Research Questions

The study is aimed at answering the following overarching research question:

1. To what extent do South African Asset Managers perceive climate changes risk to be important for integration into investment processes?

Subordinate Questions:

1. What is the perception of climate change risks within South Africa asset managers?
2. How do South African Asset Managers integrate climate change risks into their equity investment processes?
3. What are the barriers to integrating climate change risks into investment processes within the South African Asset Management Industry?

1.3 Research Problem

According to the (IPCC 2014), climate change is deemed to be the world's foremost environmental concern. The issue of climate change has been placed firmly onto global agenda with scientific world arguing that greenhouse gas emissions will alter the world's climate over time. Greenhouse gases are said to have experienced a marked increase in atmospheric concentration levels since the dawn of the industrial revolution. Changes in land use and increased fuel consumption have both contributed to the increased greenhouse gas atmospheric levels. Climate change is said to be evidenced by elements rising temperatures, frequent and more severe rainfall patterns, rising sea levels and more frequent and severe hurricanes.

The increased focus on climate change has meant that investors have also begun to consider the impact that this phenomenon will have on their returns and asset managers are starting to look at the impact that climate change risks should have on valuations.

The consideration of climate change issues has been spurred on by the movement towards ESG integration into investment strategies which started around 15 years ago, (Novethic 2015). According to (Novethic 2015), the commitment by investors towards efforts to curb climate change intensified efforts in September 2014 when at the United Nations Climate Summit in New York called on the financial community to participate in efforts to combat climate change. According to the Novethic report, a declaration stating that climate change has an impact on their investments was signed by 358 investors. This PRI launching of the Montreal Carbon Pledge at the annual PRI conference on 25th of September 2014 evidenced significant effort within the investment community regarding climate change. According to the PRI, signatories of the Montreal Carbon Pledge commit to the annual measuring and reporting of the carbon footprint of their investment portfolios. The pledge had investors such as CalPERS, Calvert Investments and PGGM Investments as some of its early endorsers.

In lieu of reports such as the Stern Review on the Economics of Climate Change which found that ignoring climate change will lead to a damage to economic growth, investors have started to consider the impact that climate change could have on their investment portfolios. In the case of South African Asset Managers, there is increased interest in ESG issues as a whole and their consideration within investment processes encouraged by changes in the legal framework as seen in the amended preamble of Regulation 28 of the Pension Funds Act, 1956 (Act No. 24 of 1956). The preamble states as follows:

“A fund has a fiduciary duty to act in the best interest of its members whose benefits depend on the responsible management of fund assets. The duty supports the adoption of a responsible investment approach to deploying capital into markets that will earn adequate risk adjusted returns suitable for the fund’s specific member profile, liquidity needs and liabilities. Prudent investing should give appropriate consideration to any factor which may materially affect the sustainable long-term performance of a fund’s assets, including factors of an environmental, social and governance character. This concept applies across all assets and categories of assets and should promote the interests of a fund in a stable and transparent environment.”

The sentiments of the regulation 28 preamble have been further supported by the launch of the Code for Responsible Investing in South Africa (CRISA), a voluntary initiative whereby endorers of CRISA adhere to principles supporting the integration of ESG issues into investment decisions.

According to (Bauer et al, 2005; Gompers et al, 2003; Kok, 2008 cited in Hebb 2012), improved ESG standards of investee companies are likely to lower risk and increase shareholder value over time, this as investors have begun to shift their focus towards long-term value.

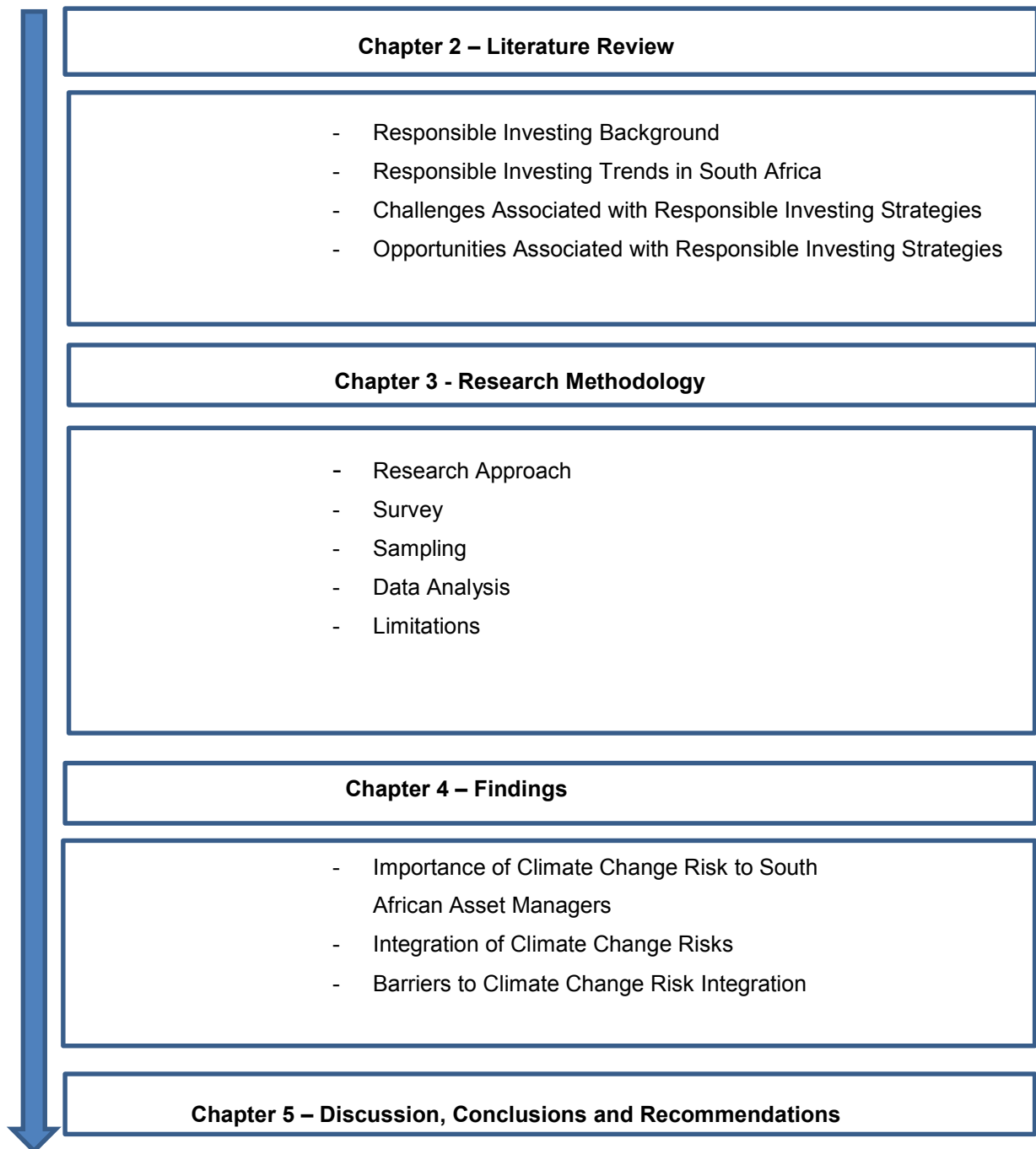
There is clear evidence of an increasing awareness on ESG issues and the importance of their integration into investment decisions. (Van der Ahee & Schulschenk 2013) conducted a study looking at the extent to which ESG issues impact investment decisions made by investors in South Africa. They found that the majority of institutional investors do consider ESG factors in investment decisions and that in spite of the most taking ESG issues into account a lesser majority (a little more than half) valued these issues on a regular basis.

What is not clear however, is the extent to which specific issues such as climate change risks are considered within investment decision-making, particularly pertaining to equity as an asset class. A report providing a snap shot of asset manager perceptions would provide an indication of progress made in generating awareness of climate change risks since such issues started gaining prominence. It would also provide insight into the practices that have emerged in response to these perceived risks.

1.4 Outline of Thesis

Figure 1 below provides an outline of the chapters that form part of this paper and the key topics that will be expounded upon.

Figure 1: Schematic Representation of Thesis Structure



Chapter 2

Literature Review

2.1 Introduction

This study is focused on increasing the understanding regarding South African Asset Manager perceptions regarding climate change risk integration within equity investment processes and this chapter provides the background and support for the themes explored in the study using existing literature. The literature highlighted in the section should point towards key elements of the study which pertain to whether or not asset managers deem climate change risks to be important for integration within investment processes and what the challenges that they face with regards to these issues are. However, the specific elements of the research questions will be covered in subsequent chapters since this chapter seeks only to introduce the key issues at a broader level by focusing on responsible investing strategies and not the specifics of climate change.

Whilst the topic of responsible investing has been extensively covered by dealt by various literature, this literature review will expand on several issues that have emerged from literature within the context of the study. The first section will cover the history of the responsible investing movement as well as the emergent descriptions and meanings that have been attached to this movement.

The second section will then outline literature that deals specifically with responsible investing trends in South Africa. Thereafter a section on challenges associated with responsible investing are outlined as found within literature. After the section on challenges associated with responsible investing, foundational elements which entail defining the concept of perception and risk will be covered. This section sets the backdrop against which the aim of the study can be achieved. The final section of the literature review will then provide a conclusion on the aspects covered in the literature review.

2.1 Background on Responsible Investing

Responsible investing has its roots in a concept known as ethical investing. According to (Viviers et al 2009) the term 'ethical investing' suggests that the basis of investing under this form of investing is typically underpinned by the individual's religious beliefs.

The use of ethical screens in investing can be traced back to religious groupings such as the Quakers and Methodists, (Scheuth 2003:189; Cowton, 2004:45 cited in Viviers et al 2009). Preachers such as John Wesley and John Woolman bemoaned investments that had negative societal impacts, (Hummels and De Leede 2014). In his 1760 sermon, Wesley argued for the "right use of money" suggesting that Christians undertake stewardship responsibility rather than proprietorship ensuring that one's neighbor is not "hurt in his substance, his body or his soul", (Sparkes 2002, p. 46, cited in Hummels and De Leede 2014). (Scheuth 2003), suggests that socially responsible investing probably goes as far back as the early biblical times when Jews were instructed to invest within ethical constraints.

The Pioneer Fund formed in 1928, was the first socially responsible mutual fund. It was launched by evangelical Protestants that were against the use of alcohol and tobacco, (Becker and McVeigh 1999:15, cited in Herringer et al 2009).

By the late 1960s, consumer and consumer activists, Ralph Nader and Saul Alinsky had been involved in the use of shareholders rights to effect social and environmental change by filing resolutions at company meetings, (Louche and Lydenburg 2006).

Beyond the 1960s the role of religion in the SRI movement was once again prominent as a trend towards collaboration amongst religious groups and corporations began to emerge. In the United States, faith-based shareholders mobilised to intersect with corporations, (Macleod 2014). The move towards a collaborative approach was led by the US-based National Council of Churches of Christ (NCC) which founded the Corporate Information Centre (CIC) in 1969 that served to monitor and report on activities by corporations relating to environmental pollution issues, military arms production and sales and issues in developing countries, (Macleod 2014). According to (Robinson 2002, cited in Macleod 2014), the

NCC, in a 1972 report, 'Church Investments, Technological Warfare and Military – Industrial Complex', the strong link between investing and morality was highlighted. The report is cited as saying "investment decisions are now deeply significant moral and social acts". A subsequent 1974 merger between the CIC and an NCC based entity to form the Interfaith Center on Corporate Responsibility (ICCR) saw the formation of a religious organization with a political agenda and economic agenda. The ICCR's formation was a result of a process which involved the filing of the first religiously inspired, internationally focused shareholder resolution when the Bishop of the Episcopal Church, John Hines at the General Motors Annual General Meeting, argued for the withdrawal of operations from Apartheid South Africa. According to (Wuthnow and Hyde Evans 2002), the bishop at that May 21, 1971 annual general meeting argued that the Episcopal Church had the right to make the request since they were shareholders of the company. This sparked what was to become the 1980s global divestment campaign. According to the (Corporate Examiner, cited in Wuthnow and Hyde Evans 2002), by the end of 1971 religious investors had submitted resolutions to IBM, Mobil, Gulf Oil and Goodyear relating to business interests in South Africa.

Due to the social upheavals such as Apartheid South Africa, significant labour related problems and the Vietnam War taking place in the 1970s, a focus on values-based investing began to emerge as a theme, (Spencer 2001, cited in Hill et al 2007). The aim of values-based strategies is to create investment portfolios that demonstrate the highest degree of congruence possible with the investor's belief system, (Rubin 2008).

The height of America's war with Vietnam was met with a modern institutionalization of the ethics based exclusions as evidenced by the establishment of the Pax World Fund in 1971, (Duetsche Bank Climate Change Advisors 2012). According to (Duetsche Bank Climate Change Advisors 2012), the Pax World Fund was at the time being used by investors wanting to disassociate with the production of nuclear and military weapons. The fund was founded by Luther Tyson and Jack Corbett who were both involved in initiatives of the United Methodist Church, (Hawken 2004, cited in de Colle and York 2008). The idea for founding the Pax World Fund arose when a parishioner approached Tyson with a question on how they could invest without funding the war in Vietnam. Tyson then started the fund with Corbett and two

business men in order to fill the gap that existed with regards to the type of fund that the parishioner enquired about, (Hawken 2004 cited in de Colle and York 2008). The aim of the fund according to Tyson and the founders was “ make it possible to invest in keeping with their values...to challenge corporations to establish and live up to specific standards of social and environmental responsibility”, (PaxWorld 2007, cited in de Colle and York 2008). According to (Richardson 2008), the Pax World Fund was the first SRI fund that could be accessed by the general public.

The establishment of the “Sullivan Principles” was a further significant contribution towards the SRI movement. According to (Sethi and Williams 2000), Reverend Leon Sullivan on March 1, 1977 announced that twelve large United Corporations had agreed to abide by a code of conduct that would govern their South African businesses with particular emphasis on the treatment of black workers. The code which was known as the Sullivan principles named after Reverend Sullivan represented a turning point in historical expectations that society had of how corporations should conduct their businesses, (Sethi and Williams 2000). Sullivan who was at the time a minister of the Zion Baptist Church as well as a member of the General Motors board of directors used his influence in the board to set out six principles relating to the treatment of workers in South Africa with the aim of eliminating the discrimination against blacks under Apartheid South Africa.

The trend towards using shareholder activist strategies within the SRI movement is said to have gained prominence in the United Kingdom during in the 1990s. According to (Giamporcaro et al 2010), this strategy gained momentum during this period in addition to screening mechanisms employed.

(Louche and Lydenburg 2006) suggests that the SRI movement in Europe actually took form in the 1980s evidenced by the launch of the Friends Provident Stewardship Trust in 1984. The forming of the Friends Provident Stewardship Trust in the UK led to an increase in responsible investing funds. Several eco-banks were also formed in the Netherlands during this period.

The occurrence of environmental disasters such as the Exxon Valdez oil spill in the Gulf of Alaska in the 1980s, as well as the increased availability of information about global warming and the ozone

layer's depletion resulted in a global tilt towards environmental issues. Various funds, mainly in developed countries began to form funds that had environmentally focused investment strategies, (White 1995:326, cited in Viviers 2007).

The trend towards the forming of funds that had an environmental focus was also evidenced in the UK which formed funds such as the Merlin Ecology Fund, now known as the Jupiter Ecology Fund in 1998. Environmental funds are not common investment strategies within the UK market, (Williams 2007). Other developments in the UK include the conducting of the Ethics for USS campaign by a group of university lecturers in 1997 and the adaptation of the policy on Sustainable and Responsible Investment in 2000. In 2000 the UK government enacted legislation that required pension funds to consult with members on whether policies on environmental, ethical and social issues ought to be adopted. This was a significant milestone in the UK responsible investing movement and the pension funds industry continued to be a significant player the in the UK investment community, (Williams 2007).

Early implementation of SRI strategies in the 2000s as seen in continental Europe, Belgium, Switzerland, and France was focused on investing in companies that had exhibited strong ESG credentials instead of merely the exclusion of companies that did not perform well in these areas, (Giamporcaro et al 2010)

As the SRI movement has evolved, the wording used to denote products and strategies associated with the movement has also altered over time. Socially Responsible Investing is defined by (Guay et al 2004) as being an investment strategy whereby focus is placed on both financial and non-financial aspects of the potential investment.

According to (Sparkes and Cowton cited in Viviers et al 2009) the word 'ethical' has not found popularity with investors due to it seeming to allude to a lack of ethics within the mainstream investment strategies. The authors suggest that the words 'socially responsible investing' are likely to attract less criticism.

Critics of SRI have however argued that it can be confused with philanthropy or be associated with activities that endorse the use of corporate assets for the furtherance of sustainable environmental practices with the aim of benefitting third parties and the greater part of society, (Sethi 2005).

According to (Sethi 2005, p:101) it would be an error to label Socially Responsible Investing as “someone’s idea of do gooders, protecting some esoteric plant or animal species, or religious zealots excoriating companies for selling perfectly legal products on ethical and moral grounds”. Instead the author suggests that SRI is the practice of investing in companies that conduct their business activities with the highest level of cognisance of the impact that their activities have on the environment and sustainability as is possible.

According to (KLD Research and Analytics 2005), the 1990s saw the advent of a new form of SRI which could be described as Value-Seeking SRI. This form of SRI was aimed at identifying social and environmental factors that could affect share price. (Richardson 2008) uses the term business case SRI to describe the form of responsible investing that is value-seeking. The author suggests that business case investors consider environmental and social issues to extent that these issues are financially material.

(KLD 2005) also highlights the concept of responsible investing described as Value-Enhancing SRI. Value-enhancing SRI is characterized by the usage of engagement with investee companies as a method of enhancing the value of investments.

Whilst the term SRI has been used historically, there has also been an emergence of the ESG investing which added the governance aspect to responsible investing. According to (Zarbafi 2011) this move towards including governance in the definition of SRI was fueled by the corporate scandals of the 1990s such as that experienced by Enron.

(Guyatt 2005) introduces the terminology of Long-Term Responsible Investing. The author describes Long-Term Responsible Investing as the integration of financial factors as well as environmental, social

and governance factors with the aim of achieving long-term returns. This definition reflects the fundamental basis for the modernized responsible investing movement. That which is concerned with long-term impacts of sustainability issues and the impact these issues have on long-term performance. According to (Holliday 2014), there has been a move in recent years towards the mainstreaming of SRI. Responsible Investing, a term closely linked to Socially Responsible Investing has emerged as a new choice of terminology which is understood to cover a broad spectrum of approaches. (Boatright 1999, cited in Scholtens 2014) describes responsible investing as a form of investing that is implemented in a manner cognisant of people and the planet.

(Viviers et al 2009) suggests that Responsible Investing differs from Socially Responsible Investing in that responsible investing involves investing based on the premise that ESG factors have an impact on investment returns and should therefore be integrated into investment processes.

The (UNPRI n.d.-a) defines responsible investment as follows:

“Responsible investment is an approach that explicitly acknowledges the relevance to the investor of environmental, social and governance factors, and of the long-term health and stability of the market as a whole. It recognizes that the generation of long-term sustainable returns is dependent on stable, well-functioning and well governed social, environmental and economic systems”

(Sandberg & Juravle 2009 cited in Woods & Urwin 2010) argue that the terms Socially Responsible Investment, Social Investment and Responsible Investment mean the same thing. The authors conducted a content analysis of the websites of 101 UNPRI signatories and found that these signatories use various terms to describe the same activity, “the integration of ESG criteria into mainstream investment decision practices”.

(Viviers and Eccles 2012) conducted a study reviewing 35 years of academic research in the area of Socially Responsible Investing which revealed that whilst the term SRI was the dominant term currently used, since 2000 the term ‘Responsible Investing’ as a term started to appear in literature.

(Caplan et al 2013)'s view is that the terms Socially Responsible Investing, Impact Investing and ESG investing all fall under Responsible Investing. They define Socially Responsible Investing as a process entailing the application of negative screens to certain shares and industries. They introduce the concept of Impact Investing which they define as investments that have as their clearly defined objective, the aim of effecting change within society. (Caplan et al 2013) define ESG investing as a process that involves the integration of ESG factors into the investment process, which is similar to, (Viviers et al 2009)'s definition of responsible investing.

The combination of social and financial goals which forms part of SRI description is highlighted by (Haigh and Hazelton 2004) who define Socially Responsible Investing as the channeling of investor funds towards investments that combine the meeting of financial objectives with the furtherance of the investor's social objectives such as those relating to social justice.

Despite the evolving definitions which have caused confusion, some key issues that are today considered to be part of the discourse on responsible investing have emerged. The issues considered to key in responsible investing practices today are highlighted in the Figure 2 below.

Figure 2: Responsible Investing Factors

Environmental	Social	Governance
<ul style="list-style-type: none"> •Waste Management •Emissions •Water Pollution •Water Use and Energy Use •Climate Change 	<ul style="list-style-type: none"> •Health and Safety •Labour and Working Conditions •Community Engagement and Relationship 	<ul style="list-style-type: none"> •Voting •Shareholder Rights •Business Integrity •Executive Compensation

Source: CDC Toolkit on ESG for Fund Managers, Tool 6; Environmental, Social and Governance Factors at Listed Companies, CFA Institute,

2.1.1 Responsible Investing Today

(Prodhan 1995 cited in Von Wallis and Klein 2014) notes that individual and institutional investors have increasingly shown an interest in SRI practices which combine their their financial interests with the aim of countering negative developments. This desire has led to a growth within this movement.

According to (Cengiz et al 2010, cited in Von Wallis and Klein 2014) whilst investment decisions initially made a triangle with focus on liquidity, risk and return, over the years there are practices that have begun to emerge to make a square, with sustainability being the fourth side. This movement is seen as a being a diversion from “neoclassical homoeconomicus” which was focused only on economics.

The modernised version of SRI is one that no longer finds its focus as being simply values-based with consideration of moral and ethical issues alone. It is today viewed as a strategy that has the concepts of risk and financial returns as its pillars, (Martin 2008, cited in De Zwaan 2012).

According to the (UNPRI n.d.-a), investors are now becoming more aware of ESG factors and have the desire to incorporate these issues. The UNPRI suggests that the growing interest in responsible investing practices is said to be driven by a combination of the financial materiality of ESG factors being acknowledged, the recognition of the link that ESG issues have in the fulfilment of fiduciary duties, concerns about short-term thinking and the impact it has on investment returns, the desire for more management styles that provide a holistic assessment of long-term drivers of risk and return, public policy measures encouraging greater shareholder responsibility and competitor pressures.

The next section provides background on the United Nations Principles for Responsible Investment Initiative and the role it plays in today's responsible investing movement in collaboration with investors.

2.1.2 Institutional Investors and the Role of the UNPRI

The role on the United Nations Principles for Responsible Investment in the advancement of modern responsible investing principles needs particular focus. According to the UNPRI website, the UN PRI which according to (Gray 2009) is credited with introducing the term ‘ESG’, was launched in April 2006 at the New York Stock Exchange. The principles were launched after the then UN Secretary-General, Kofi Anan invited a group of the world's largest institutional investors to be part of an initiative aimed at developing set of responsible investing principles.

The UNPRI has been the main facilitator of discourse regarding mainstreaming ESG into asset manager practices. According to (Derwall et al 2005, cited by, Threadneedle 2010), the UN PRI plays a major role in facilitating the discussion around the incorporation of ESG factors into long-term investment decision asserting that these issues have a bearing on the achievement of superior risk adjusted returns. In becoming signatories of the UNPRI, the signatories commit themselves to the adherence to the following six principles:

1. Incorporate ESG issues into investment analysis and decision-making processes.
2. Be active owners and to incorporate ESG issues into the fund's policies and practices.
3. Seek appropriate disclosure on ESG issues by the entities they invest in.
4. Promote acceptance and implementation of principles within the investment industry.
5. Work together to enhance their effectiveness in implementing the principles.
6. Report on their activities and progress towards implementing the principles.

According to the (UNPRI n.d.-b) at the end of April 2015, the total assets under management of the signatories had reached \$59 trillion which represented a 29% increase from April last year. The UN PRI currently has 1400 signatories from across the world.

The UN PRI are aimed at furthering the formation of common standards amongst investors that want to consider ESG issues within their portfolios, (Horwitz 2010). According to the author, the PRI which are voluntary, are not meant to be rules that the signatories are required to comply with but are instead meant to be guidelines that are to be used to enhance decision-making mechanisms and the manner in which ownership responsibilities are fulfilled against the backdrop of a developing landscape regarding ESG issues. The signatories of the UNPRI are meant to act as leaders in the advancement of the principles within the investments community, (Horwitz 2010).

The UN PRI has also been a driver of collaborative efforts on ESG issues, encouraging signatory collaboration through the provision of an online platform known as the PRI Engagement Clearing House. According to (Gray 2009), the PRI Engagement Clearing house can be used by members to

describe initiatives within their organization and to solicit support for these strategies. Members through the engagement on this platform can even use the information shared on this platform to improve their initiatives.

In furthering the advancement of the practice of integrating ESG factors into investment decisions, the UNPRI introduced practical guides to support institutional investor frameworks, (UN PRI n.d-c). These guides include, The ‘Fixed Income Investor Guide’, ‘Integrating ESG in Private Equity’ and the ‘Introductory Guide to Collaborative Engagements’. In addition, the UN PRI released a report that provided insight into how various brokers and investment Managers integrate ESG issues into their equity valuation processes. To expand the reach of the information contained in this report the document, entitled ‘Integrated Analysis: How Investors are addressing environmental, social and governance factors into fundamental equity valuation’, was translated into Japanese, Korean and Portuguese.

Table 1 below provides a breakdown of the different categories that UNPRI signatories can fall into.

Table 1: UNPRI Signatory Categories

UNPRI Signatory Category	Description
Asset Owner	“End-asset owners” who own long-term retirement savings, insurance and other assets. Example: Pension Funds
Investment Manager	Asset managers, manage assets on behalf of third parties that would either form part of the institutional or retail market.
Professional Service Partner	Professional Service Partners who do not own or manage assets but provide products or services to asset owners and investment managers.

Source: UNPRI

The Investment Manager category represents the largest portion of UN PRI signatories, representing 65% of the total, (UNPRI n.d.-b)

According to the UNPRI, the Professional Service Partner category whilst comprising Institutions that do not own or manage assets, does have some level of influence over how the asset owners and

investment managers manage ESG issues. The act of becoming a signatory within this group is a demonstration of an acceptance of the materiality of ESG issues to investment management processes.

According to (Finnemore 1993, cited in Gray 2009, p3), as a leader in responsible investing practices, the UNPRI has the potential advantage of “being able to create actors, define responsibilities, and construct a new social understanding”. The role of the UNPRI as a facilitator and educator is set to continue propelling environmental, social and governance issues into centre stage investment industry discourse.

2.2: Responsible Investing Trends in South Africa

With growing focus on sustainability issues and their impact on companies around the globe, South Africa has not been without increased tilt in focus towards such issues.

Financial Markets have in particular seen a broader awareness of sustainability issues generally referred to as Environmental, Social and Governance (ESG) factors. According to (Giampocaro and Pretorius 2012, p.1), *“The issue is no longer only that economies grow but also how they grow. In this sense, financial instruments and markets are seen to have the power to affect social, economic, and environmental outcomes.”*

South Africa's responsible investing movement started in the 1990s when trade unions opted not to invest member contributions with companies that either supported the Apartheid regime or were perceived to be engaging in unfair labour practices, (De Cleene and Sonnenberg 2004:15 cited in Herringer et al 2009). According to the authors, the focus of SRI funds was employee empowerment and infrastructure development.

In recent years, the emergence of corporate governance codes has been a significant driver of the consideration of responsible investing practices in South Africa. According to (Atkins and Maroun 2014), the South African corporate governance landscape has had a strong stakeholder-inclusive approach underpin with the aim of advancing company behavior that takes into account broader stakeholder

interests and those of the institutional investment community. South Africa's King Code for Good Governance, in the latest version known as King III highlights the importance of sustainability related practices. According to the Institute of Directors South Africa (IODSA), the body to which ownership of King III is assigned, "Sustainability is the primary moral and economic imperative of the 21st century. It is one of the most important sources of both opportunities and risks for businesses."

The King Committee on Corporate Governance was formed in 1992 and its first report published in 1994 was influenced largely by the 1992 Cadbury Committee Study in the UK, (Sarraf 2004 cited in Andreasson 2011). According to (Mhone 2003, cited in Andreasson 2011), the release of King I, the committee's first report coincided with South Africa's reintegration into the global economy after the end of Apartheid and the government's newly established focus on socio economic transformation. The committee then assigned the release of future reports to the Institute of Directors South Africa in 1994. A second King Report was released in March 2002.

As the responsible investing movement continued to gain momentum, the South African Investor community has in recent years launched a code relating to ESG factor integration into the investment process. This against the backdrop of the United Nations Principles of Responsible Investing's earlier launch. The Code for Responsible Investing South Africa (CRISA), launched in July 2011, is a voluntary code that requires South African institutional investors and service providers that endorse it to integrate ESG factors into investment decisions in a similar manner to that outlined by the UNPRI. The integration of ESG factors as outlined in the five CRISA principles has provided South African institutional investors including asset managers with a guideline of dealing with the risks that linked to ESG issues. According to the IODSA, "At the heart of CRISA is the recognition of the importance of integrating sustainability issues, including ESG, into long-term investment strategies". This sentiment is outlined in Principle 1 of CRISA which states the following: "An institutional investor should incorporate sustainability considerations, including ESG, into its investment activities as part of the delivery of superior risk-adjusted returns to the ultimate beneficiaries."

Whilst CRISA and the UNPRI seek to address the integration of three aspects, environmental, social and governance concerns, the focus of South Africa's responsible investing practices has been Black Economic Empowerment. This is due to government regulation emphasis on black economic empowerment issues. According to (Giamporcaro et al 2010) positive screening approaches employed in South Africa tend to focus on issues such as black economic empowerment and infrastructure development. This is in line with findings made by (Viviers et al 2008, cited in Herringer et al 2009).

Black Economic empowerment has emerged in South Africa as a key ESG issue to Asset Managers. (Herringer et al 2009, cited Eccles et al 2008)'s findings were that South African pension funds, asset managers and advisory service providers deemed black economic empowerment to be one of the most important ESG issues for consideration. The authors also found corporate governance, infrastructure development, sustainability, gender empowerment issues and employee relations to be significant.

South Africa has also experienced a growth in the size of the Shari'ah investment strategy market. These type of strategies involve the application of ethical exclusions on the basis of Shari'ah or Islamic law, (Hussein & Omran, 2005:105, cited in Herringer et al 2009). Globally the SRI movement began to focus on these types of strategies in the 1900s by excluding certain industries such as those that are involved Pork Production from portfolios, (Renneboog et al 2008, cited in von Wallis and Klein 2014).

In recent years the responsible investing movement has been driven by large institutional investors. In 2006 the Government Employees Pension Fund, which is the largest institutional investor in South Africa, endorsed the United Nations Principles for Responsible Investment. The GEPF led the launch of the United Nations Principles for Responsible Investing Initiative in South Africa, GEPF. (Sarkas 2014) suggested that a driver of responsible investment in South Africa particularly within South Africa's Pension fund market has been the "strong adoption of CRISA and the UNPRI by the Government Employees Pension Fund (GEPF)".

The importance placed by the GEPI on responsible investing issues when considering potential investments through their asset manager the Public Investment Corporation is evidenced by the following statement found on their website:

“We also encourage the companies we invest in to strike a balance between profits and being socially responsible, and to actively manage their environmental impact while maintaining high levels of corporate governance standards.

”

According to the GEPI website, the GEPI has also worked alongside the Johannesburg Securities Exchange on reviewing the Socially Responsible Investment Index criteria in 2008.

A survey conducted by (Van der Ahee and Schulschenk 2013) found that the most critical driver for the consideration of ESG issues by institutional investors in South Africa was Return on investment, whilst corporate citizenship and CRISA were considered the biggest motivations in terms of overall importance. Client demand was also considered to be an important driver of ESG integration. Client demand was further cited as being an important driver in a change in fund manager attitudes in a 2012 survey conducted by Investment Solutions. Survey respondents included both local and global fund managers, (Sarkas 2014).

(Sarkas 2014), suggests that within the South African context another driver of responsible investing dialogue has been the amendment to Regulation 28 of the Pension Funds Act No 24 of 1956. According to the author, the requirement that pension fund trustees consider ESG factors in their decision making has gotten “the wheel turning”.

According to (Kraushaar 2013), upon initial assessment of regulation 28, the Department of National Treasury highlighted the lack of coverage of SRI issues and advised that these issues would be covered in the amendment to the regulation. The amended regulation came into effect in July 2011 with a preamble that highlighted the importance of ESG issues within the retirement investing environment, signaling a significant paradigm shift within the industry.

2.3: Types of Responsible Investing Strategies

Whilst some authors do differentiate between Socially Responsible Investing and Responsible Investing, for the purposes of this research paper, the term “responsible investing” is used as an umbrella term for strategies that take environmental, social and governance issues into account.

The following section is aimed at providing an outline of responsible investing strategies that asset managers can employ when managing funds on behalf of their clients.

According to (Viviers and Eccles 2012), the three responsible investing strategies that have dominated academic literature over the last 35 years are Negative Screening, Positive Screening and Shareholder Activism. The (UNPRI n.d.d) has suggested responsible investing approaches relating to integration and thematic investing.

2.3.1 Screening

Screening is the simplest approach used in advancing responsible investing approaches, (Hylton 1992). (Scheuth 2003), defines screening as a process involving the exclusion of companies from investment portfolios on the basis of certain environmental and social criteria. According to (Hylton 1992), screening is the form of responsible investing that was used during apartheid when investors refused to invest in companies that had links to the system.

Screening can be done on an inclusionary basis, this is known as positive screening. It can also be done on an exclusionary basis known as negative screening, (Hill et al 2007).

(Eurosif 2006 cited in Stenström and Thorell 2007) describe negative screening as a concept broadly involving the exclusion of companies from a portfolio based on their involvement in certain practices. Examples of such exclusion includes, the exclusion of tobacco companies or companies that are involved in the manufacturing of weapons. Another form of negative screening is that described as norms based screening. This type of screening involves excluding companies on the basis of their

violation of norms such as the United Nations Universal Declaration on Human Rights, (Stenström and Thorell 2007).

According to (Norup and Gottlieb 2011), there are some funds that also use second order negative screening. Second order screening involves not only excluding companies that do not meet initial screening criteria but also screening out companies that are involved in business transactions with the initially screened out companies. According to the authors, an example of this is excluding a company that sells paper to a tobacco company, if tobacco companies are being screened out.

Positive screening is described as an approach whereby companies that demonstrate commitment to the improvement of responsible investing practices are included in portfolios, (Eurosif 2006 cited in Stenström and Thorell 2007). According to the authors, companies that meet the criteria set by the responsible investing researchers would be the ones included.

(Cowton 1999 cited in Von Wallis and Klein 2014) there is a further screening approach which is a mixed approach an example of which would be a two stage approach whereby negative screening is conducted and thereafter positive screening is applied. Another mixed approach entails the scoring of a company on an overall basis. This is known as the trade-off approach.

Another approach to screening is known as the Best in Class approach. According to (Pinner 2007, cited in Geevarughese 2010), investors using the best in class approach select the best company to invest in within a sector. A typical process followed in this approach involves the generation of sector specific questions which are then addressed by companies. The author suggests issues such as stakeholder relations, sector, product or services as being potential issues for discussion with companies. Common screening questions address a company's adherence to codes of conduct, (Hylton 1992). According to (Hylton 1992), codes such as the Sullivans Principles, the McBride Principles and the Valdez Principles could be considered.

The best in class approach does not involve excluding any industry on the onset (Cengiz et al 2010 cited in von Wallis and Klein 2014) and it is underpinned by the desire to place companies scoring well in an exemplary role, (Bischofskonferenz 2010, cited in Von Wallis and Klein 2014).

2.3.2 Shareholder Advocacy/Activism

Shareholder Advocacy or Activism is described as the undertaking of ownership responsibilities by socially aware investors, (Scheuth 2003).

This strategy involves the use of voting rights arising from share ownership by investors to engage to engage with company boards with the aim of influencing their approach to ESG issues (or a specific issue). The engagement with investee companies can either be direct or be conducted through the proxy voting process. If the investor deems their engagement with company to have not achieved the desired result, they have the option to disinvest from the company, (De Cleene & Sonnenberg 2004 cited in Giamporcaro 2011).

(Ransome and Sampford 2013) reviewed (Amos and Oulton 2005; Nisar 2005; Steele 2005; McLaren 2004) and identified several forms of engagement that are used globally. The first is a screening related strategy whereby SRI investors engage in direct dialogue with investee companies with the aim of encouraging the change in company behavior or warn them of a possible divestment.

The second form of engagement which is also screening related follows a name and shame approach whereby companies are publicly named and an announcement is made regarding divestment. This method would be used in the event that the issues raised are not responded to by the investee company.

A third form of engagement involves fund managers raising issues without the aim of screening but rather with a focus on encouraging corporate reform. Engagement can also take place in a collaborative form with the aim of placing collaborative pressure on companies. A final form of engagement identified by the authors entails engagement that furthers policy reform.

(Sparkes 2001 cited in Geevarughese 2010) connected shareholder activism to responsible investing using the following statement: "SRI is generally considered to be an equity based activity, as one of its core aims is to use the power and influence of shareholders to positively affect corporate behavior". Shareholder engagement on ESG issues that is transparent, properly motivated, informed and objective has been described as being legal by (Solomon 2007).

As institutional investors increasingly convert to SRI strategies or responsible investing practices, a different kind of shareholder pressure than was previously seen has emerged, (Sparkes and Cowton 2004). The importance of the institutional investor in driving change within companies through engagement and voting activities is increasingly being understood by the investor community.

With a large part of the discussion on responsible investing issues such as climate change being raised through engagement, the importance of this strategy continues to have significance. Specifically pertaining to climate change risk, the (Carbon Trust 2006, cited in Solomon 2007), suggest that institutional investors consider climate change risk to be an important part of their agenda when engaging with investee companies.

(Johnsen 2003, cited in Dam and Scholtens 2015) suggests that motivation for the use of shareholder activist strategies is that often funds that implement SRI strategies are too small to allow for the investor to influence a company's behavior and therefore becoming an active shareholder is the best way to influence company behavioral tendencies. This strategy is not without limitations though as some countries have legislation that limits the percentage holding that the investor can have and further to this size of the holding required would mean that the investor would have to engage in substantive collaborative efforts in order to have any impact.

According to (Bainbridge 2008) one of the challenges associated with shareholder activism is the costs that are incurred in order to monitor individual companies. This is in line with (O'Rourke 2003) who suggests that the costs of preparation, defending and following up with companies are high when considered against the benefits of engaging in shareholder activism. The author cites potentially poor

relations with the companies and a hardening of position on issues by the company as challenges. The hardening of positions on issues would occur where there is a public debate. The company might try to use even a small group of investors votes to support their view. In addition to these challenges, (O'Rourke 2003) suggests, the difficulty in sharing agenda information amongst activists, the resultant watered down agendas after attempts to collaborate by activists and differing thresholds of acceptable results amongst shareholders.

2.3.3 Integrated Analysis

As mentioned in previous text, the concept of ESG factor integration into investment processes has been formally brought to view through the introduction of United Nations Principles for Responsible Investments (UNPRI) in April 2006. The UNPRI requires signatories to integrate ESG factors into their investment analysis and decision-making processes.

According to the UNPRI, integrated analysis or ESG integration involves the proactive consideration of ESG factors in investment decision-making. (Grayswan Investments 2013) describes ESG as a phrase as a “catch-all term” for socially responsible investing criteria. The ESG concept addresses the three key issues (environmental, social and governance factors) that have emerged as factors for consideration within the responsible investing practices of businesses.

(Briand et al 2011) identified two forms of ESG integration in literature. The first was full ESG integration whereby an entire portfolio has an ESG tilt aimed at capturing positive ESG exposures and minimizing negative ESG exposures. The second form of ESG integration identified was that involving the creation of ESG branded investment whereby only a portion of AUM is dedicated to ESG investing.

The integration of ESG factors into the investment process has increasingly become an additional benefit offered by asset managers, (van Duuren et al 2015). There are however some critics of ESG integration.

According to (Kempf and Osthof 2008, cited in van Duuren et al 2015), ESG integration results in increased costs. They found that the additional costs translated into mutual funds that integrated ESG factors charging higher expense ratios amounting to a 13 basis point difference.

2.3.4 Thematic Investment

According to the (UNPRI n.d.-d), thematic investment involves selecting assets on the basis of investment themes such a climatic change or demographic change.

Thematic investing entails the investment in companies viewed as sustainable due to their involvement in green infrastructure, clean fuels, low-carbon infrastructure and energy efficiency projects. Companies that are considered to be providing solutions that enhance adaptation to today's challenges would be included in the spectrum of sustainable companies and would form part of thematic portfolios, (Responsible Investment Association, n.d.).

Table 2 below provides a summary of responsible investing strategies that can be employed.

Table 2: Summary of Responsible Investing Strategies

Screening Strategies	Shareholder Activism	Integrated Analysis	Thematic Investment
<p>Negative Screening: <i>Companies are excluded based on certain practices.</i></p> <p>Positive Screening: <i>Companies meeting certain criteria are included.</i></p> <p>Mixed Approach: <i>Negative screening applied ,thereafter positive screening applied.</i></p> <p>Best in Class: <i>Selection of best companies within a sector using certain criteria.</i></p>	Use of voting rights to effect change in corporate behavioral practices.	Proactive integration of ESG factors in investment processes.	Investment strategies based on a particular theme such as climate change.

2.4: Challenges Associated with Responsible Investing Strategies

As a concept that is not necessarily found within traditional investing strategies, responsible investing is bound to have challenges associated with it.

2.4.1 Lack of Broadly Accepted Terminology

A challenge associated with responsible investing strategies is that relating to the lacking usage of broadly accepted terminology, (Business and Sustainability Development: A Global Guide 2007, cited in Herringer et al 2009). According to (Woods and Urwin 2010), during 1980s the term Socially Responsible Investing was used to describe ethically oriented investment practices, whilst in recent

years the term 'Responsible Investing' has emerged. Responsible investing is concerned with ESG consideration with the aim of enhancing long term investment returns as well as having a positive impact on society, (Woods and Urwin 2010). (Sethi 2005) suggests that even if there was an agreement with regards to the definition of SRI, different industry players would attach their own meanings to the words within that definition.

The confusion regarding responsible investing terminology creates an additional challenge in that it causes difficulty for researchers trying to evaluate responsible investing practices, (Sandberg et al 2009). In addition, confusion on responsible investing terminology makes it difficult to mainstream ESG integration practices. Mainstreaming relates to the introduction of responsible investing practices to the broader investment community, (Sandberg et al 2009). According to the authors the lack of a clear definition of what constitutes Socially Responsible Investing procedures makes it hard for the broader community to know what SRI actually is and therefore how to approach issues relating to it. Confusion regarding what ESG integration is therefore a major challenge that may lead some investors to not integrate extra-financial risks within investment processes at all.

In response to the observed confusion regarding terminology a call has been made by authors such as (Monks 2002) for efforts to be made towards responsible investing terminology clarification, (Sandberg et al 2009) . (Sandberg et al 2009, cites Monks 2002; p. xiii) as follows: "People talk a lot about socially responsible investing (SRI). We need to talk more about who determines what constitutes SRI. Who sets the standards? Or put another way, what is SRI?" According to (Herringer et al 2009), South African authors (Wierzycka 2004; Heese 2005:729; Du Preez 2005:32) have also made a call for further clarification of responsible investing terminology.

2.4.2 Short Term Focus and Herding

A WEF report found that the most pension funds use short term oriented benchmarks to measure the performance of their funds and that these benchmarks, due to their short-term orientation, do not allow for the incorporation of ESG factors. The tendency of asset management performance to be measured and incentivized using short term measurement periods places a limitation to the long-term outlook that

ESG factor consideration within investment decision-making requires, (Zadek et al 2005). This as the contribution of asset manager pay structures towards the performance of investment strategies gains importance, (Zadek et al 2005).

(Guyatt 2005) similarly found that the tendency towards short-termism presented an obstacle to the implementation of responsible investing strategies. According to (Frederick et al 2002, cited in Guyatt 2005), short-termism is defined as the tendency to focus on the present at the expense of extended periods of time. (Guyatt 2005), found that the challenges associated with the valuation of intangibles linked to environmental, social and governance issues resulted in a hesitancy to integrate the factors in into the investment process, particularly within the UK market. Institutional herding was also found to be a hindrance to the advancement of responsible investing practices.

There exists some linkages between herding behavior and short-termism, (Guyatt 2005). According to (Froot et al 1992, cited in Guyatt 2005) when investors are using a shorter investment horizon they are more likely to engage in herding behavior and place emphasis on short-term information.

Herding behaviours can also be explained by the tendency of asset managers to gravitate towards the more conventional decisions as a result of these decisions being perceived to be defensible to investors, (Guyatt 2005). Asset managers will therefore tend to engage in practices that they can explain with greater ease and this will be evidenced in their stock selection. (Scharfstein and Stein 1990) cited in (Guyatt 2005) introduced the concept of reputational herding whereby due to a need for investors to explain themselves on a regular basis, they will tend to adhere to convention as a form of risk management. According to the author this preference for conventional decisions leads to the reluctance by asset managers to integrate sustainability factors into decision-making since the integration of these factors falls outside of conventional strategies.

2.4.3 Skepticism regarding the Performance of Responsible Investing

Strategies

One of the main challenges associated with ESG integration relates to skepticism regarding the link between ESG and financial performance, (Sun et al 2011). According to (Campbell and Slack 2011, cited in Sun et al 2011) many sell side analysts are not convinced about the effect of ESG information on share value. The authors conducted a study amongst bank analysts and found that ESG issues such as environmental factors are not material enough to be considered their analysis.

Some authors suggest there is a perception that social considerations and company performance have a negative relationship, a perception that further contributes to existing challenges associated with ESG integration, (Paredes-Gazquez et al 2014). According to (Perrini et al 2012; Orlitzky 2003, cited in Paredes-Gazquez et al 2014), although over the long term a cause and effect relationship between social considerations and company financial performance can actually be proven, the short-term focus of the asset management industry does not allow for such determination to be made.

The root of this perceived negative relationship between social considerations and financial performance is stated as being related to the belief that ESG factors are of no value to the investment process despite some findings that dispute this, (Hoehler and Hespenheide 2013; Hespenheide and Hoehler 2012 cited in Paredes-Gazquez et al 2014).

According to (Stang 2012) modern portfolio theory forms the premise on which arguments against the integration of ESG factors are formed. The author states that the use of any filters goes against the principles of portfolio optimisation. According to (Sharpe 1996 cited in Stang 2012), the use of filters would limit the potential number of shares that an investor can invest in and this would then negatively affect the risk-return profile of their portfolio. This is linked to the concept of diversification, since a diversified portfolio is considered to be less exposed to risk than one that is not.

Some authors however have found evidence that there is no performance and diversification differences between SRI funds and traditional strategies, (Bello 2005; Galema et al 2008).

According to (Bassen and Kovacs 2008) although there appears to be no conclusive evidence regarding the link between ESG company performance and company financial performance, the evaluation of ESG performance does lead to an improved understanding of the risks and opportunities that the company faces, resulting in better stock selection and risk management practices.

2.4.4 Perceived Inadequacy of Information on ESG Issues

The inadequacy of non-financial information presents a further challenge to the advancement of responsible investing practices, (Zadek et al 2005). According to (Zadek et al 2005) a survey conducted by Arthur D Little revealed that the investment community in Britain considered the non-financial information available to them to be inadequate.

The quality of ESG information has been criticised for its lack of detail and its inappropriateness for the conducting of proper ESG analysis, (Solomon and Solomon 2006, cited in Sun et al 2011). (Murray et al 2006, cited in Sun et al 2011), however suggest that if capital market participants started to integrate ESG issues within their analysis, a more regular, improved ESG disclosure by companies would follow.

Furthermore, there is a lack of consistent and standardised methods of disclosure of ESG information by companies, (Basson and Kovaks 2008). According to the authors company reports on ESG issues are not useful to investment analysts since these reports are not supplied at regular intervals. ESG information supplied in company reports is also communicated in a manner that makes it difficult to be able to compare it with peer information or against different periods, (Basson and Kovaks 2008).

Available information is important in the progression towards obtaining a good measure for assessing ESG issues, (Igalens &Gond, 2005, cited in Paredez-Gazquez et al 2014). The authors having studied the Spanish market found that ESG information that is published is often lacking in relevance and is scattered across various web pages and reports making the process of obtaining information difficult.

2.4.5 Perceived Lack of Materiality of ESG Issues

According to (Amaeshi and Grayson 2009) the challenge of determining whether ESG issues are material or not seems to be the 'missing golden link' in the move towards mainstreaming these issues. (Zadek et al 2005), states that the perception of asset managers regarding the materiality of ESG factors is a key determinant of the framework within which the decision to consider these factors is made.

(Amaeshi and Grayson 2009) suggest that the issue concerning the materiality of ESG factors is dependent on factors such as the quality of ESG data, management processes, methodologies and approaches used as well as the presence of a price system such as an emissions trading system.

The materiality of ESG issues is also said to be long-term performance oriented and therefore not in necessarily supportive of short-term performance objectives which have found prominence in market thinking, (Amaeshi and Grayson 2009).

According to (Little 2003, cited in, Amaeshi and Grayson 2009), the extent to which ESG issues are considered to be material is linked to the competence of analysts. An improvement in competencies along the investment value chain which consists of analysts, asset managers, asset consultants and trustees, would improve the possibility of integration of ESG factors within investment processes and the quality of considerations regarding the materiality of ESG factors within investment processes, (Zadek et al 2005). Mainstream analysts are currently unable to factor in ESG factors into investment analysis as a result of their lack of understanding of these factors and how these factors influence the long term investment returns of portfolios, (Mainstreaming Responsible Investment 2005, cited in Viviers 2007).

2.4.6 Pension Fund Industry Regulation and Trustee Fiduciary Duties

The growth in the adaptation of responsible investing practices within the pension funds industry is important due to the high degree of ownership of the markets that this industry has, (Sparkes and

Cowton 2004). Due to the level of influence that pension funds have, the regulations affecting this industry can serve as a hindrance to the advancement responsible investing practices.

Regulations relating to fiduciary duty have in some parts of the world presented challenges. According to the WEF, the introduction of regulations for trustee fiduciary duties to demonstrate compliance with client performance objectives has led to increased sensitivity regarding risk taking activities as more trustees opt for what they perceive to be safer traditional investing strategies, (Mainstreaming Responsible Investment 2005:9, cited in Viviers 2007).

According to (Richardson 2007), authors such as (Hutchinson and Cole 1980; Langbein and Posner 1980) have argued the duties of loyalty and prudential investment as part of their fiduciary duties does not allow for much consideration of responsible investing aspects. (Richardson 2007) then suggests there are some arguments that contradict this view.

The first argument is that fiduciaries have the overarching responsibility to act in best interest of beneficiaries and within the financial markets context this has meant optimisation of financial returns. The author argues however, that the interpretation of the phrase “best interests of the beneficiaries” could include the consideration to accommodate third parties. It depends on how beneficiaries are defined, (Richardson 2007). This points to a possible consideration of sustainability issues affecting the broader community.

The second argument raised by the author is that if a trustee considers non-financial objectives without sacrificing financial returns it does not necessarily mean they are acting imprudently. According to the author citing (Mahoney and Roberts 2002; Waddock and Graves 1997; Edwards 1998; Cormier, Magnan and Morard 1993), social and environmental risks often have an impact on financial returns and companies with positive environmental performance would typically perform well financially.

The report by (Freshfields Bruckhaus Deringer 2005, cited in UNPRI n.d-e), argued that integrating ESG considerations into investment analysis was not only permissible but as part of fulfilment of their fiduciary duties it was required of trustees.

In South Africa, the amendment to regulation 28 of the pension funds act has served to place a requirement upon trustees to consider ESG factors when managing fund assets as part of their fiduciary duty.

Despite amendments made to Regulation 28, a lack of regulatory support mentioned in the text above, has also been suggested to be still hindering the integration of ESG factors into investment decision making processes within the South African context. According to (Bornoehis and Healing 2005, cited in Herringer et al 2009) despite the broad support for the rules governing pension funds being amended to incorporate SRI, South Africa is not at the stage whereby advantage of SRI allocations would be utilized. According to (Healing 2005, cited in Herringer et al 2009) the gap in legislative clarity is adding to the challenges associated with SRI strategies. The author argues the current status likely to remain in place for as long as there is no guidance being provided to the pension fund industry.

2.5 Perception of Asset Managers

2.5.1 Definition of Perception

Since the research set out seeks to outline perceptions of asset manager as pertaining to climate change risks, it is appropriate to set out how perception is defined in literature.

According to (Kotler 2005, as cited in Ukpebor and Ipogah 2008), perception is defined as the process of receiving, selecting, organizing and interpreting information by an individual. Some authors have defined perception as the process by which individuals organize and interpret sensation with the aim of generating meaning in relation to their surroundings, (Pickens 2005, citing Lindsay and Norman 1977; Sulphrey 2014, citing Robbins 2011).

(Sulphrey 2014) suggests that the characteristics of perception are such that it can differ from reality and due to its complexity it can either be innate or it can be a learned. The variables within the perception process consist of inputs, Process, Outputs and Behaviour stages. The inputs can either be people, events or objects that are received by the receiver through their senses, (Sulphrey 2014). The Process variable relates to the processing of the inputs and the outputs are the resultant attitudes that stem from the processing stage. The behavior stage is the observed behavior based on the perceived outputs, (Sulphrey 2014)

(Sulphrey 2014) further suggests that the perceiver's personal traits such as their motives and experiences that can influence their perception. This is similar to what (Assael 1995 cited in Pickens 2005) suggests by saying that receptiveness to stimuli is a highly selective process and factors such as an individual's personal belief system, attitudinal aspects, motivation and personality could have a significant bearing on the degree of receptiveness. Characteristics of the target being perceived could influence the perception. For instance, a person with a big size built or a small size built is more likely to be noticed in a group than an averaged sized individual. The author suggests that the target is perceived in association with a particular background. According to the author the context or situation in which the objects or event occurs will influence the perception of the object of events. For example, a person wearing casual attire will stand out within the context of a formal gathering.

Perception can be described as bearing three forms: Perception of Objects, Perception of Actions and Perception of events, (Sulphrey 2014). (Broadbent 1958, as cited in Pickens 2005) introduced what is known as a filter model to explain perceptual vigilance, the tendency for individuals to select the stimuli that satisfy their immediate needs. According to (Broadbent 1958 cited in Pickens 2005), as a result of limitations in capacity, when individuals are faced with information that is provided through two differing channels (i.e. one auditory the other visual) , the individual's perception system will process only what they deem to be most relevant to them and their perceptual defense will filter out information contradicting existing beliefs, attitudes and motivation. This process is known as Selective Perception.

2.5.2 Definition of Risk Perception

It follows that when looking at perceptions around climate change risk it would be useful to define the concept of risk and risk perception.

Risk is defined as the probability for and the consequences of an event occurring, (Adams 1995, cited in Olstedal et al 2004). Risk perception is defined by (Sjöberg et al 2004) as being the “subjective assessment of the probability of a specific type of accident happening and how concerned we are with the consequences”.

Risk perception therefore involves the valuation regarding the likelihood of an event occurring and evaluation regarding the consequences of a negative outcome.

According to (Leiserowitz 2006), cultural theorists suggest that individual perceptions of risk are shaped by their worldview in accordance to whether they fall into the hierarchist, individualist, egalitarian or fatalist category. (Dake 1991, 1992, cited in Leiserowitz 2006) defines worldviews as the cultural, social and political attitudinal shapers that underpin the manner in which individuals respond to complex situations.

The Hierarchists are said to be fearful of any deviation from societal norms, (Leiserowitz 2006). They believe in placing the group rather than the individual's needs first, and they have a preference for the existence of defined roles in society and procedural restrictions, lines of authority, stability and order, (Ripberger et al 2012).

According to (Ripberger et al 2012), individualists, in sharp contrast to hierarchists, are not bound to the group's identity and view the world as having limited restriction. Individualists feel threatened by attempts at control such as regulatory measures as they value autonomy, (Leiserowitz 2006).

Egalitarians are concerned with the distribution of risk costs and benefits, (Leiserowitz 2006). They have a strong preference for societal equality with no differentiated status, (Ripberger et al 2012).

Fatalists deem themselves as being subject to external control and believe that they have little control over what happens to them, (Ripberger et al 2012).

Conclusion

Responsible investing has come a long way from its early ethical screening roots. The launching of mutual funds that ascribe to responsible investing principles such as the Pioneer Fund signaled the move that type of strategy was starting to make towards main stream investment practices. The activist movements of the 1960s and 1970s also made way for these strategies to be further advanced.

As the movement evolved so did the terminology which altered from its traditional “Socially Responsible Investing” terminology to what is called Responsible Investing today. The terminology change has also served to make the term more acceptable to mainstream investors since the term “ethical investing” was not favoured.

The formation of groupings such as the United Nations Principles of Responsible Investing Initiatives has further contributed to the current advancement of responsible investing practices with the term ESG integration or incorporation being popularized as result of the PRI principles. Likewise in South Africa, the establishment of the Code for Responsible Investing South Africa and corporate governance codes known as the King Codes of Governance Principles and the tilt towards ESG issues within pension fund regulation has led to these issues becoming increasingly part of discussions within the asset management industry.

Today the industry is able to employ various strategies such as screening, shareholder activism and the use of thematic funds as a way of implementing responsible investing strategies. However the industry does face challenges such as those relating to the confusion on terminology, short-termism, a lack of understanding regarding the impact that ESG issues can have on investment returns and the interpretation of fiduciary duty by pension fund trustees.

The employment of various strategies will be determined by the extent to which these associated challenges are overcome.

The perceptions of asset managers regarding risks that are associated with ESG factors will also contribute to the considerations made regarding responsible investing strategies. The manner in which asset managers perceive risk associated with ESG factors can, however, be dependent on external factors that may influence their understanding of the significance of these. Asset manager perceptions of risk therefore has a bearing on how these issues are considered within investment portfolios.

In the following section the findings from the study are set out providing insight on how asset managers perceive the responsible investing sub-topic of climate change within the context of equity investment processes.

Chapter 3

Research Methodology

This chapter is aimed at providing a description of the research methodology used for this study. The chapter will cover the research approach, the rationale used in choosing the research instrument, sampling techniques, data analysis as well as the limitations to the study.

3.1 Research Approach

The study involved the utilisation of a survey aimed at collecting data comprising quantitative elements such as that which is collected through the use of Likert rating scales and ranking scales, and data that was qualitative in nature using open ended questions and questions that required participants to answer “yes”, “no” and provide reasons for certain answers, (Hodgson 2012).

According to (Creswell 2014), qualitative research is used in the exploration of meanings that individuals ascribe to social or human problems. (Babbie and Mouton 2001) describe qualitative research as that pertaining to the description and understanding instead of the explanation of human behavior. (Yin 2011). In the case of this study, because the aim was to describe and understand asset manager perceptions regarding climate change risk integration within equity investment processes, qualitative research was useful.

(Witte and Witte 2009, cited in Hodgson 2010) explains quantitative data as being a set of observations or a single observation that is representative of an amount or a count. According to (Hodgson 2012), Rating scales are quantitative in nature despite the end point labelling. The survey included several rating questions and a ranking questions, which using the author’s definition, solicited quantitative data.

Quantitative data was approached from a positivist philosophical viewpoint. According to (Gray 2009), a positivist viewpoints is one that believes in the measurability of qualities. In the case of this study, questions that relate to the extent to which climate change risk is important, for example, would have

measurable responses and would follow specific observable rules, (Gray 2009). In contrast, the qualitative information was approached from an interpretivist viewpoint since this approach is well suited for qualitative data, (Kaplan and Maxwell 1994, cited in Kelliher 2005). According to (Gray 2009).

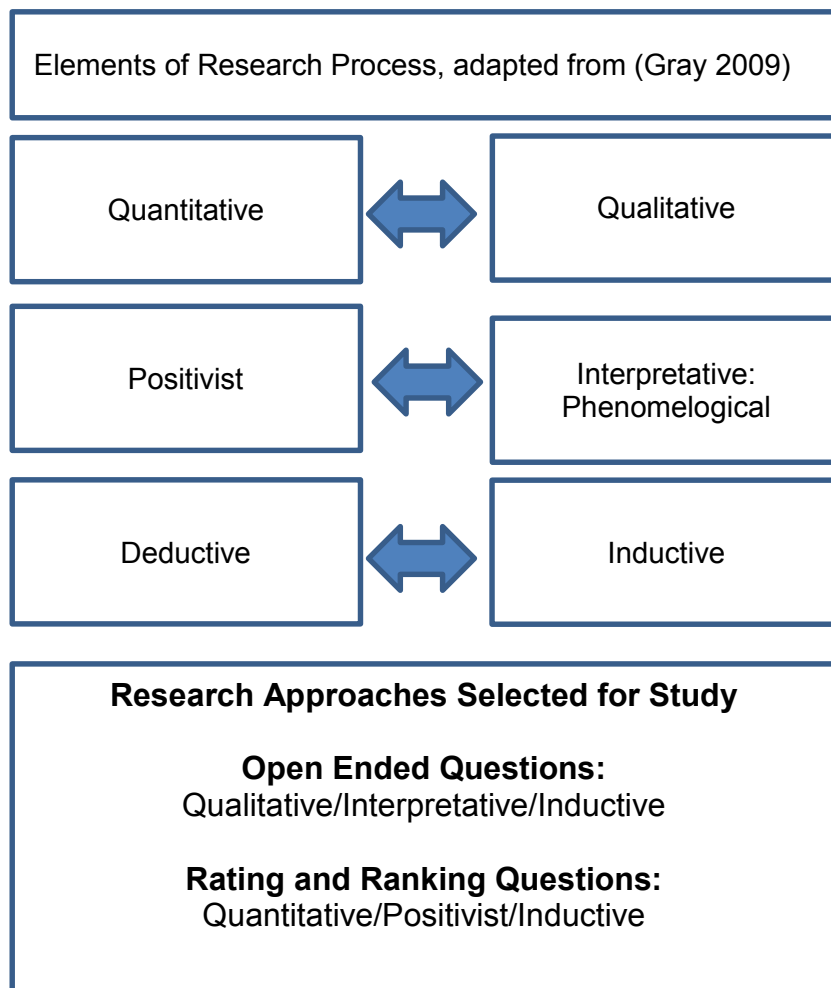
The interpretivist viewpoint was also useful since it entails studying people's views and experiences and their perspectives regarding these experiences, (Gray 2009). The perspectives of asset managers were the subject of study and an interpretivist viewpoint that is aimed at the understanding the participants (South African Asset Managers), perceptions of reality, (Lather 1992, cited in Haigh 2001) in this case climate change risk and would provide in depth insight into their actions. Furthermore, since the study sought to understand what asset managers consider to be the biggest barriers to climate change, with the aim of understanding why climate risk integration may not take place in some instances therefore an interpretivist approach would be suitable for qualitative data relating to these barriers.

A subset of the interpretivist approach is the phenomenological philosophical viewpoint, (Gray 2009). (Creswell 2014) describes a phenomenological approach as that which provides description of the lived experiences of the participants as pertaining to a particular phenomenon, which in the case of this study is climate change risk. This approach was considered well suited used for qualitative data due to its focus on experiences in relation to a phenomenon rather than concrete ratings. The phenomenological approach was also suited for the purposes of this study since as suggested by (Lester 1999) the study involved in-depth gathering of data using surveys with aim of isolating the perspectives of the respondents.

An inductive approach was taken towards both the qualitative and quantitative data. An inductive approach involves the collection of data and subsequent to conducting data analysis, the formulation of a theory, (Saunders et al 2003). This differs from the deductive approach which entails the collection of data which is then used to test against an existing theory. According to the authors, the inductive approach is well suited for use alongside the interpretivism philosophical vantage point of conducting research. The inductive approach is appropriate for the purposes of this research since theory will result from the research and the data collected, (Bryman and Bell, 2003, cited in Rankila 2011).

Figure 3 provides a representation of the research approach options and approach taken for this study.

Figure 3: Research Approaches Outline



Source: Researcher; (Gray 2009)

3.2 The Survey

An online survey was determined to be the suitable instrument for the conducting of this study. The purpose of the survey was to collect responses from South African Asset Managers that would be useful in responding to the research questions and the survey which is included in Appendix A, was structured in a manner that would result in a response to the research questions. The survey questions solicited insight on South African Asset Manager Perceptions on climate change risks and the extent to which these risks are perceived as important, how these risks are integrated and information on what the perceived barriers to integration are.

The survey method was deemed useful since it would allow for questions to be structured in a manner that would effectively respond to the research questions. Since it is perceptions being determined, a survey would allow for questions that use rating scale to gauge the level of importance of climate change related issues and for questions that involve selecting the most preferred method of climate change risk integration.

The flexibility with regards to questioning within a survey made this form of instrument attractive for the purposes of this study. Online research surveys allow for a variety of types of questions to be included, (Evans and Mathur 2005). The survey consisted of 20 questions comprised of closed ended and open ended questions (see Appendix A). (Babbie and Mouton 2001) describe open-ended questions as those which request the respondent to give their own answer to the question being asked. On the other side of the spectrum, a closed-ended question will provide a list of possible answers that the respondent is requested to choose from. The use of open ended questions allowed for more elaborative answers thus including some detail that a closed-ended question may exclude. Most of the questions were however be closed-ended since this method of questioning furthers “uniformity” and simpler processing, (Babbi and Mouton 2011).

The use of an online survey was also considered to be both time-efficient (Kannan et al 1998, cited in Evans and Mathur 2005) and convenient for the asset managers, (Evans and Mathur 2005). The online survey method allowed for some responses to be received at night and some early morning depending on the participant’s schedule. The use of an online survey also ensured that asset managers across South Africa could be surveyed ensuring a wide geographical coverage of respondents. (Evans and Mathur 2005) suggest that online surveys simplify the data collection and analysis process. In addition, the online survey method has been suggested to be attractive due to its cost-effective nature when collecting information from large groups of people, (Gray 2009).

(Evans and Mathur 2005) suggest that as result of process being conducted online, the administrative process involving the sending out and receiving of questionnaires is reduced. In the case of this

research, for the convenience of the respondents, a PDF version of the questionnaire was sent out to the sample of participants in order to enable them to review the questions before for going online to complete the survey. This was appreciated by participants who wanted to print or email the survey to colleagues for approval or review the questions and discuss them with their colleagues. The survey responses received were deemed to be representative of company views and not the individual views as implied in the topic and the survey questions.

The ease of following up with participants was further motivation for using online surveys for these research, (Evans and Mathur 2005). Participants received an electronic reminder regarding the survey one week before the deadline date that was provided to them. The reminder allowed for the inclusion of the option to complete surveys after the deadline date if they provide notification in that regard. Online surveys present a flexible element making them attractive as a method of collecting data.

Online research surveys can prohibit the proceeding to the next question prior to the completion of a particular question, (Evans and Mathur 2005). This was ideal for the purposes of this survey since some questions required that the participants provide an answer before proceeding to the next section of the survey. In addition, online research surveys allow for the completion of answers that are relevant only to a particular respondent. This was useful for the purposes of this survey since some questions required answers only if the respondent answered “yes” to a particular question.

3.3 Sampling

A sample of 30 Asset Managers that manage a South African Equity product was selected using a combination of March 2015 ASISA statistics and Multi-Manager, 27Four’s 2014 Annual BEE Survey, *BEE.economics* which seeks to highlight transformation issues within the asset management industry. Using the 27Four survey helped with the inclusion of asset managers that manage institutional equity mandates and yet do not form part of ASISA statistics as they do not have retail funds. The sample included 8 of South Africa’s largest Asset Managers with rand denominated assets under management of more than R50 billion each according to the March 2015 ASISA statistics.

The final sample consisted of 13 respondents out of the 30 asset managers that received the request to complete the survey, with one of the 8 largest asset managers indicating that they were unable to provide specific responses on climate change risks and hence could not complete the survey. A second large asset manager experienced internal administration process barriers regarding the granting of permission to the employee completing the survey. This process was still underway at the time of analysis of results therefore the responses of that entity could not form part of the results.

(Marshall 1996) suggests that samples can be divided into three categories. The first type being Convenient Sample which essentially involves choosing a sample that is the easiest to access for the purposes of the research. The second type of sample is known as a Judgement Sample. A judgement sample is formed with the aim of forming the sample that will be most productive for the purposes of the research. This sample may have as its framework the researchers' knowledge base either from experience in the field or the research itself. The third type of sample is a theoretical sample whereby samples are based on theories that have emerged from research.

The sample formed for the purposes of this research used is closest to a Judgement sample, since the selection of asset managers was based on the industry knowledge base of the researcher and the aim was to create a sample most well positioned to provide responses to the survey.

In putting together a list of asset managers for survey consideration was made of the total number of South African Asset Managers that manage an equity product.

Due to the fact that the research conducted related to the perceptions around climate change risk integration as pertaining to equity an asset class and that actual analysis of investee companies selected for investment by the asset manager would be a requisite for inclusion in the sample, the sample only includes single managers and not multi-managers.

The sample was finalised after responses from asset managers that could not be included due to their investment strategy being passive one rather than active one were received. The intention was to

consider only active investors for the sample. Passive investing, also referred to as indexing is when portfolios are created with the intention of tracking the index in terms of performance. A passive investment portfolio would invest in the same stocks that index comprises of and in the case of a fully indexed fund the weightings of the stocks will be in proportion to their weighting within the index, (Damodaran 2012).

In contrast, active investors aim to beat the index, (Damodaran 2012). This would be done through stock selection and weights given to those particular stocks within portfolios. Active Asset Managers were considered for this sample since the shares selected in the portfolios are subject to the decision making independent of index construction.

The asset managers were selected with a bias towards including a wide range in assets under management in the study. The number 30 was considered adequate in view of the number of South African Asset Managers of Collective Investment Schemes as listed in the ASISA statistics report.

Within the asset management industry, investment analysts conduct the research on companies and then recommend these for inclusion or exclusion within an investment portfolio, a decision to buy a share is then made by portfolio managers. The questionnaires could be completed by any member of the investment team with in-depth knowledge of the considerations made as part of the investment process. This could be either an analyst or a portfolio manager.

3.4 Administration of the survey

In order to collect the data relevant for the purposes of understanding the perspectives of asset managers in relation to climate change risk integration we opted to conduct a survey electronically using an online survey.

Six steps followed as suggested by (Shaughnessy et al 2011). First a determination was made regarding the kind of information that was going to be collected which was information that would

provide insight on how asset manager perceive climate change risks, how climate change risk information is best integrated according to them and what the barriers are to integration. It then was decided that the questionnaire would be sent conducted by sending out an electronic link to an online survey to industry experts. The first draft of the survey was then drafted.

The survey was divided into three sections. The first section was named “Climate Change Risk Perceptions” and respondents were requested to answer questions that sought to gain insight into their overall perception on what climate change is and how important it is to their investments business. The second section, sought to determine asset manager perceptions on integrating climate change risk into the equity investment process. This section also explored perception regarding the information available to asset managers on climate change risks as well their foresight on how climate change risk consideration within investment processes will evolve over the next 5 years. The final section was aimed at soliciting responses that further the understanding of asset management perceptions on what the barriers to the integration of climate change risks into the equity investment process are. After reviewing the first draft, amendments were made to ensure that the survey was flowing coherently and was not too lengthy.

The questions were then loaded online and the survey was tested. Final edits were conducted and thereafter a document specifying how it should be used was drafted. This document described the survey to participants and directed them to the relevant link to the survey. Each participant was emailed a link to the survey which they could then use to access the survey and respond to anonymously to the questions asked. The participants were advised of their anonymity and a timeframe within which the survey was to be completed.

3.5 Data Analysis

Once sufficient responses were collected and sufficient follow ups had been conducted regarding the completion of the survey, data analysis process began. This process of data analysis began with the analysis of the open ended questions using thematic analysis. Thematic analysis involves the

identification of living and /or behavioral themes or patterns, (Aronson 1994). Thematic analysis is particularly valuable to processes where the aim is to isolate interpretations from a sample, (Alhojailan 2012).

In analysing the data, key emergent themes that contributed to answering the study's research questions were identified. Certain statements were also selected for use in citing respondents as part of the presentation of the findings. The thematic analysis of the open ended questions involved initially analyzing the responses in search for themes. The common themes were then separated from the text and rows were created in Excel for each theme in order to determine the percentage of responses that represented the particular theme. The percentages of respondents for each theme was then calculated and are presented as part of the findings chapter.

The responses for the closed-ended questions were coded and then added onto Statistical Package for the Social Sciences (SPSS) statistical tool. The coded responses were then used to generate descriptive statistics from SPSS including the mean and standard deviations and to generate frequency graphs using Microsoft Excel. For one of the questions, grouping of responses was applied in order to be able to analyse the data effectively. Responses were grouped according to the responses they gave in order to determine the percentage of responses falling within specific categories.

3.6 Limitations of the Research Approach

Due to the varied areas of interest within asset management teams, a challenge faced was that relating to finding the appropriate team member that would be able to answer climate change risk related questions. In some asset management teams, the marketing team was responsible for responding to surveys however challenges would have been that they would have had to consult the investment team for the answers, making the process obtaining survey response answers a lengthy one.

The time constraints that asset management teams have meant that some asset management teams felt that they did not have time to complete the survey. This resulted in asset managers that may have

made a valuable contribution not being part of the survey. Despite the time taken by most asset managers being under 20 minutes, the issue was sometimes asset managers did not even have the time to consider completing the survey.

The further challenge was that of asset managers forgetting to complete the survey even if they intended to do so. This made two reminder emails necessary in order to ensure that sufficient responses were received. Related to the time constraints, some asset managers did not initially read the survey and had to be reminded to do so. Others lost the initial email that contained the link to the survey and had to request that it be resent to them.

Two asset managers requested to complete the survey and send it in PDF to the email address used to send out the link. Acknowledging the difficulty in collecting the data from asset managers, the option to use this method of response was allowed. The use of this method however, presented challenges in that one of the asset managers completed a question incorrectly resulting in this response not being included in final list of responses to that particular question.

Another limitation to this study relates to the anonymity aspect. Due to the anonymous nature of the survey it was impossible to be able to determine whether a certain type of response should be attributed to an asset manager of a specific size. In line with keeping the identity of the respondents confidential they were not asked to indicate the size of their assets under management. However, there was some level of determination we could make regarding the range of asset manager AUM sizes included in the final list of respondents due to the fact that some indicated via email that they had the intention to participate in the survey.

Chapter 4

Findings

In this chapter the research results that have been generated using the responses to the survey are presented. The first part of the results represents responses indicating South African Asset Manager overall perceptions on climate change risk integration. The aim is to present results indicating whether asset managers understand what climate change risks are, whether these risks are important to them and in what areas these risks are perceived to be important.

The second part of the results represents responses indicating what asset managers consider to be the best way of integration, if they do integrate these risks. The final section then relates to responses regarding the barriers to the integration of climate change risks within equity investment processes.

4.1 The Importance of Climate Change Risk to South African Asset Managers

In order to establish the extent to which South African Asset Managers perceive climate change risk to be important for integration with equity investment processes the general understanding by Asset Managers of what climate change risk is was established.

Using thematic analysis two main categories of themes were identified. The first relate to what asset managers consider climate change to be. The second theme relates to what asset managers perceive to be the cause of climate change. These two categories were used to establish whether South African Asset Managers understand what climate change is. It is clear from the results that South African asset managers do have some level of understanding regarding what climate change is.

Climate change was defined by 62% of the respondents as being a change in weather patterns or a change in the climate. This indicates that many of the respondents understand the underlying concept

of climate change. This is illustrated by the following responses: One respondent alluded that *“Climate change is the change in current weather patterns due to excessive carbon emissions released into the Earth’s atmosphere as a result of industrialization”* (Asset Manager 7). Another respondent described climate change as *“it has been characterised over the last decade, is the (adverse) changes in the climate due to human actions and the consumption of natural resources”*(Asset Manager 9).

In addition to that, 15% of the asset managers that responded to the survey made specific reference to the long-term nature of climate change with one asset manager defining climate changes as being a *“Change in long-term weather patterns that are generally detrimental to the environment.”*(Asset Manager 6) Some asset managers defined climate change by associating it with the heating of the atmosphere with 15% mentioning “heating of the atmosphere” as part of how they define climate change. An example of such a response goes as follows, *“Our atmosphere is subject to heating due to emissions of gases which result in heat retention. This is the scientific basis of climate change.”*(Asset Manager 10).

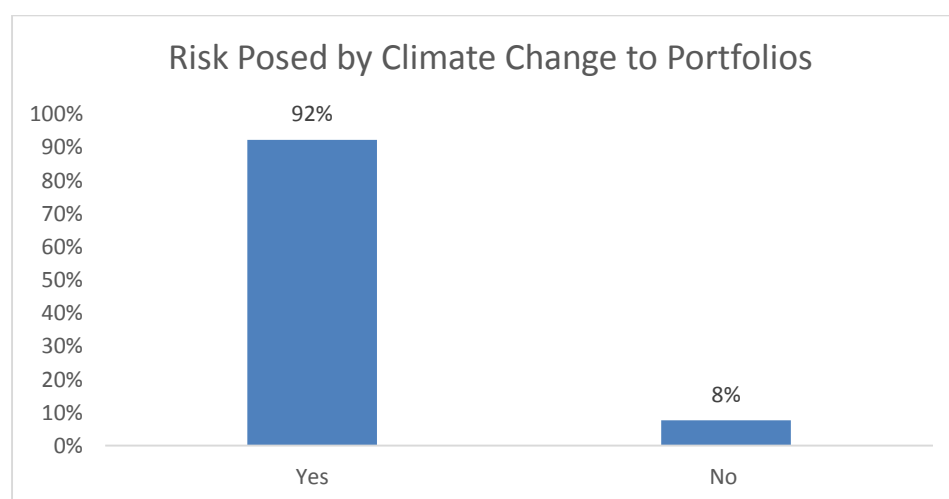
With respect to the cause of climate change, 38% of the asset managers cited either carbon dioxide or pollution as being the causes of climate change. Of the respondents 31% actually specified that climate change was human induced or a result of industrialization. For example one asset manager defined climate as: *“Changes to global weather patterns brought about by human pollution of the environment, specifically due to air pollution.”*(Asset Manager 3). A small segment of the respondents went as far as focusing on the definition of climate change as it relates to their role and knowledge of responsible investing and climate change. For example, one respondent noted that: *I have a deep scientific understanding of climate change, and part of my role is to translate this into financial risk measures. I am currently building tools to measure and report on climate impact and risk for the investments that we make.”* (Asset Manager 8)

The manner in which asset managers perceive climate change within the context of their firm and the portfolios that they manage is important in addition to them understanding what climate change is. This is because ultimately the perceptions regarding climate change in relation to investment portfolios will

have an impact on the resultant responses by asset managers to the risk posed and long-term investment performance. Asset managers may understand climate change is, but may not necessarily consider the risks associated with it as having any impact on their businesses. In Figure 4 it is illustrated that there is general perception that climate change matters to asset managers. Figure 4 indicates that, 92% of asset managers that responded to the survey considered climate change as posing a risk to the portfolios that they managed whilst only 8% do not perceive it to be a risk. This was indicative of an existing consensus amongst respondents that there is a risk element linked to climate change and is also indicative of the risk impact on portfolios that asset managers perceive to exist.

Asset managers that indicated that climate change does not pose a risk to their portfolios may have considered the short-term impacts of climate change rather than long-term impacts in responding to the survey, as was the case for one asset manager that sent comments advising on the differentiation that they make between the risk posed by climate change over the long-term and the risk posed over the short term. The asset manager pointed out that whilst they do in fact consider climate change to pose a risk to their portfolios over the long term, there was no short-term risk worthy of noting. According to the asset manager, climate change poses a risk to every aspect of life over the long term.

Figure 4: Summary of results showing if respondents perceive climate change to be a risk to portfolios



In describing the nature of the risks posed by climate change 33% of the respondents cited carbon tax and regulatory reform as being key risks. The increased cost of doing business for the companies that

the asset manager is invested in was also a common theme with 33% explicitly referring to input costs. Another 16.7% of respondents made reference to economic impacts associated with resource scarcity. Other specific indicators regarding risks posed to portfolios related to investments in renewable energy projects, as well as fossil fuel companies.

Whilst most respondents indicated that they consider climate change as posing a risk to portfolios, the extent to which they consider this type of risk important varies. Table 3 below illustrates that on a scale of 1 to 5, the rating representing the level of importance of climate change risks to the various asset managers was between 1 and 4. The average rating as shown in Table 3 was 2.62 with a standard deviation of 1.044 about that mean.

For the purposes of explaining the results we will assume the meanings for the ratings to be as follows:

- 1 - Very Important
- 2 - Fairly Important
- 3 – Important
- 4 – Slightly Important
- 5 – Not Important at All

Therefore, given a mean rating of 2.62, one can conclude that on average respondents rated the importance of climate change to their firm as somewhere between Fairly Important and Important. As indicated by the maximum value, no asset manager indicated that climate change is not important at all.

Table 3: Summary of results showing importance of climate change to respondent firms

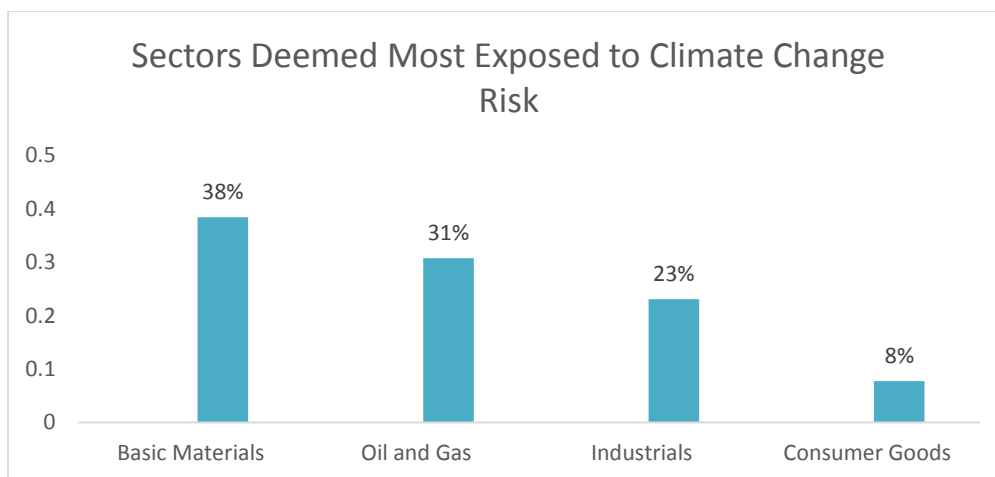
	N	Minimum	Maximum	Mean	Std. Deviation
Climate Change Importance to Firm	13	1	4	2.62	1.044
Valid N (listwise)	13				

The nature of exposure to climate change risks varies across sectors. As shown in Figure 5 the majority of respondents indicated that the Basic Materials and Oil and Gas sectors were the sectors that they deem most vulnerable to climate change related risks. Looking at Figure 5, it may appear that the Basic Materials and Oil and Gas Sectors percentages of 38% and 31% respectively are close to that of the 23% representing industrials sector, however, closer analysis reveals otherwise. Since the Basic Materials sector and Oil and Gas sectors form part of the broader resources sector, it can be said that 69% of the respondents perceived the resources sector as being the sector most vulnerable to climate change risks. This amounts to a 46% difference between the number of respondents indicating the resources sector to be most at risk and those that selected the industrials option.

As illustrated by Figure 5 consumer goods sectors had the lowest percentage, 8%, of respondents that deem it to be the sector most exposed to climate change risks. This sector could however also form part of the greater industrials sector make its total 31 %. However it is important to note, that the Healthcare, Consumer Services, Telecommunications, Technology, Financials and Utilities sectors not displayed in the chart, were not considered by any asset manager as being most exposed to climate change.

Since these numbers place emphasis on the sector most perceived to be at risk it does not mean that there are no other sectors perceived to be significantly at risk. One asset manager that opted not to use the online survey but rather to send their responses via email, suggested that they would have elected another sectors but the survey did not allow for that. That being said the Resources sector came through as the most important sector with regards to climate change risk.

Figure 5: Summary of results showing sector perceived as being most exposed to climate change risk



4.2: The Integration of Climate Change Risks by South

African Asset Managers

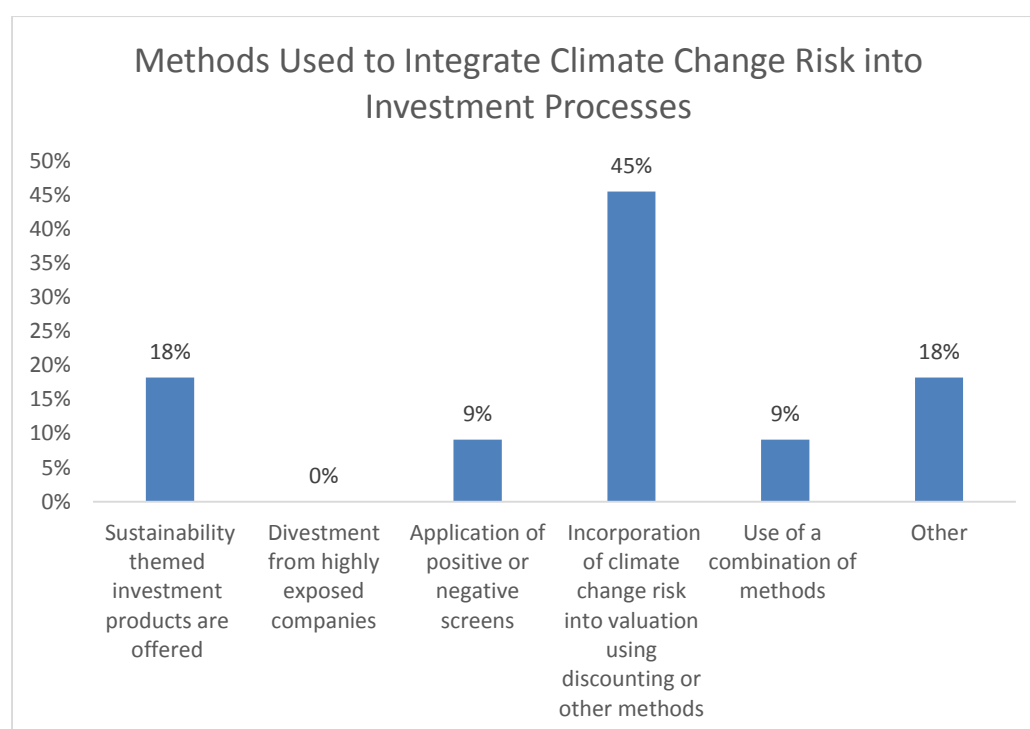
The majority of the respondents, 85% indicated that they do explicitly consider climate change risks within their investment decision processes whilst only 15% indicated that they do not. Whilst the majority of respondents indicated that they explicitly consider climate change risks within their investment portfolios, Figure 6 highlights the variation of methods that are used to consider these risks. Figure 6 provides a breakdown of the various methods of climate change risk integration and the percentage of respondents that indicated the use of each.

As shown in Figure 6, the method that had the highest percentage of respondents indicating that they use it to integrate climate change risks was that entailing the integration of climate change risks using discounting and other methods. Figure 6 reflects that of the asset managers that integrate climate change risks within their investment decision-making processes, 45% of the respondent indicated that they use this method. It must be highlighted however that this method is not representative of a particular way of integration but represents a broad spectrum of methods whereby climate change risk is given some value and then that value is factored into the valuation of a share, one such method being discounting.

Figure 6 shows that sustainability themed products were indicated as being used by 18% of the respondents. This method is used by asset managers who strategically consider using ESG issues as a way to effectively market products that are diversified and which can meet the growing demand for such products. Some South African asset managers are specialist providers of such products.

Only 9% of the respondents indicated that their method of integration of climate change risks is best described by negative or positive screening methods whereby companies are excluded (negative screening) or included (positive screening) on the basis of certain sustainability criteria. The same percentage of respondents indicated that they use a combination of methods. There were no asset managers indicating that they divest from exposed companies as a method of integration.

Figure 6: Summary of results showing respondents' preferred method of integration



It would be expected that some asset managers would not want to be categorised and provision was made in this regard by including the option of 'other' followed by a description of the method used. 18% of the asset managers that responded indicated their preference for other methods of integration. The asset managers that indicated that that they prefer to use other methods of integration gave the following descriptions of these methods:

"Model of Resource Efficiency, using water, waste and energy" (Asset Manager 4)

“As I pointed Environmental impact is our proxy for Climate Change. We use Legae Securities ESG research outcomes on stocks to see how much impact they have on Environment. Our research philosophy is based on three pillars:

- i) Valuation of stock;*
- ii) Quality of Stock;*
- iii) Market Expectations; “*

ESG factors are looked at when interrogating the Quality of the company.

“Before investing into a stock we look at how it has fared against all those three pillars I have highlighted above. Therefore Quality, where ESG factors are entertained, is one of three parts when deciding to invest or divest from a stock. Therefore it follows that ESG, Climate Change proxy, is considered in all our equity investments.” (Asset Manager 13)

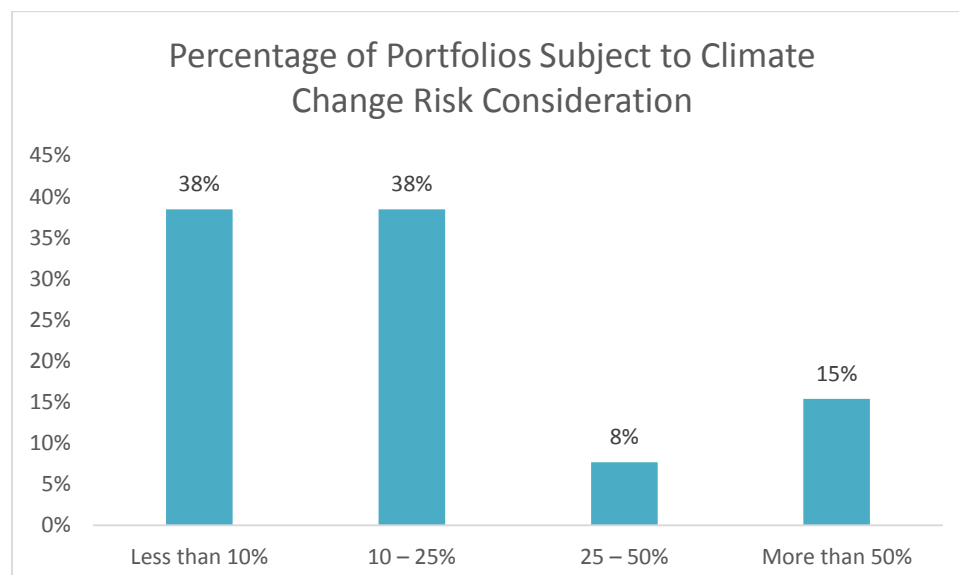
Looking at Figure 6 it can be seen that most respondents use other methods besides sustainability themed products, screening and divestment, with some even opting to use a combination of methods. This indicates that South Africa does not have a large specialised market in the area of ESG integration, with many asset managers opting rather to use mainstream responsible investing strategies.

The extent to which asset managers integrate climate change risks varies as well, since some have a business model that centres around the integration of ESG risks such as climate change and others have business segments focused on such strategies. As seen in Figure 6 above some asset managers think of ESG issues within the broader context of their investment processes and integrate these risks within their valuation using methods such as discounting.

As shown in Figure 7, only 15% of the respondents indicated that climate change risk is considered for more than 50% of their portfolios whilst 38% of the respondents indicated that this risk is considered in

less than 10% and between 10% and 25% of their portfolios. The percentage of respondents indicating that between 25 and 50% of their portfolios is subject to climate change risk integration was only 8%.

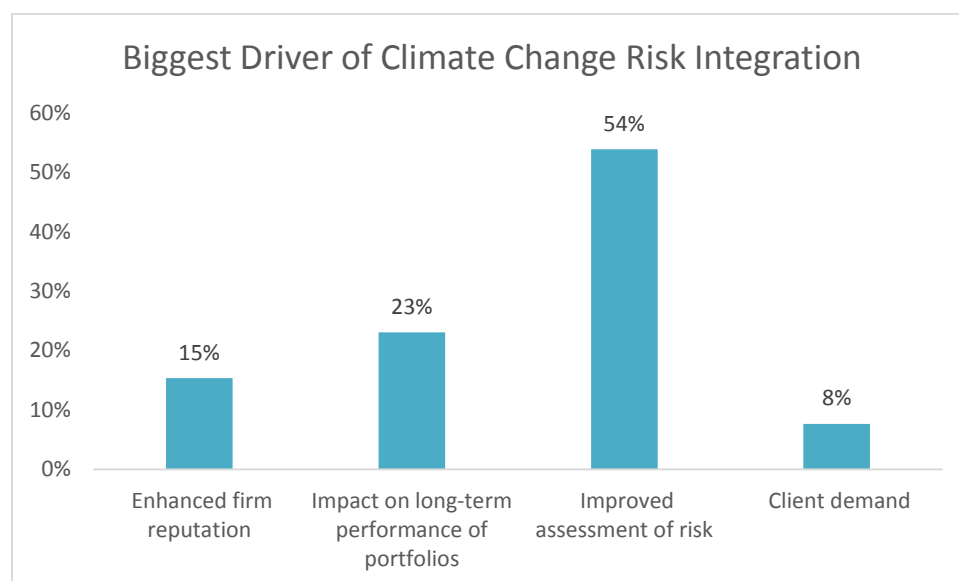
Figure 7: Breakdown of percentages of respondent portfolios subject to climate change risk integration



Since the role of climate change risks within the asset management industry has been evolving as such issues gain prominence, it was also important to understand whether South African asset managers think that climate change risk will become even more important to the industry in the medium to long-term periods. Climate change was indicated as being expected to be a key risk for consideration in the next 3 to 5 years by 77% of the respondents with 23% of them indicating that they do not think this risk will gain prominence over this period.

The consideration of climate change risks both within the next 3 to 5 years or in the short term will be influenced by asset manager perceptions regarding certain drivers such as the ones shown in Figure 8 below. These drivers are the potential for enhanced firm reputation, the impact that such considerations have long term investment portfolios, Improved Assessment of Risk and Client Demand. Figure 8 illustrates that 54% of the respondents indicated that the improved assessment of risk that is perceived to emanate from climate change risk integration, is the biggest driver for integrating this risk with investment decision making processes. In contrast, as shown by Figure 8, only 8% of the respondents indicated client demand as being the biggest driver of climate change risk integration.

Figure 8: Summary of results showing perceived biggest drivers of climate change risk integration



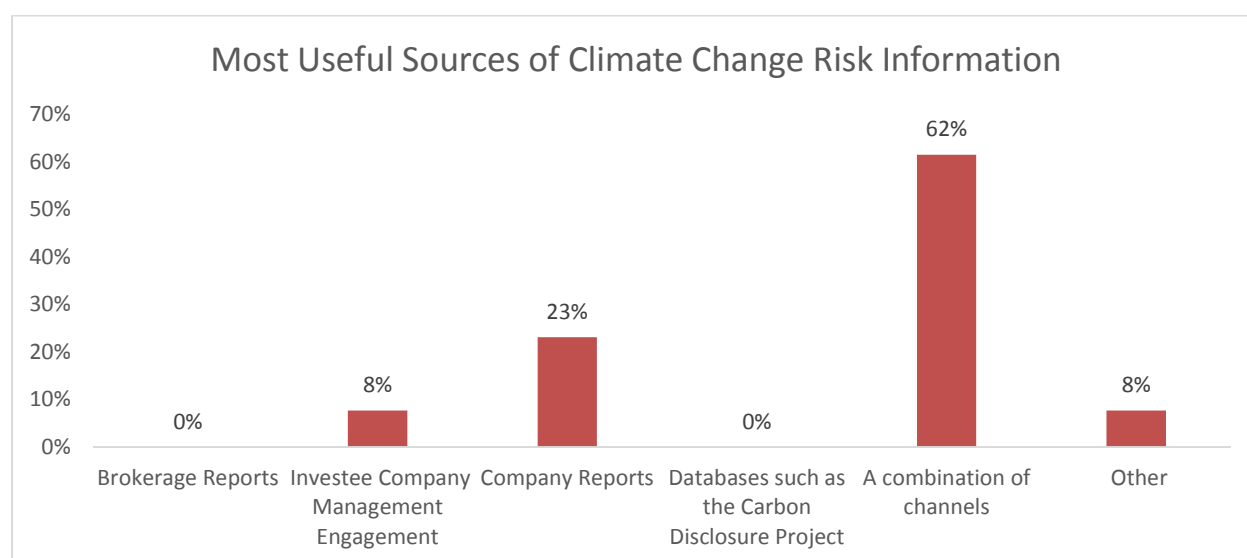
The impact that climate change could have in long-term returns of portfolios was indicated as being the biggest driver to climate change risk integration by 15% of the respondents whilst 15% indicated that enhanced firm reputation was the biggest driver.

There are some linkages between the different drivers in that an improved assessment of risk would over the long-term enhance returns. Therefore it can be concluded that 77% of the respondents consider factors with investment return implications to be the biggest drivers to climate change risk integration.

In order to be able to integrate climate change risks within investment decisions the information on climate change risks would need to be sourced from a reliable source. As seen in Figure 9, these sources can vary from company annual reports "Company Reports" to reports released by sell side brokers, "Brokerage Reports". Sometimes information can be sourced through engagement with company management. Since methods probably have different merits when compared to each other, some asset managers prefer to use a combination of methods and benefit from the merits of each. The majority of respondents, 62% indicated that this was the manner in which they preferred to source information.

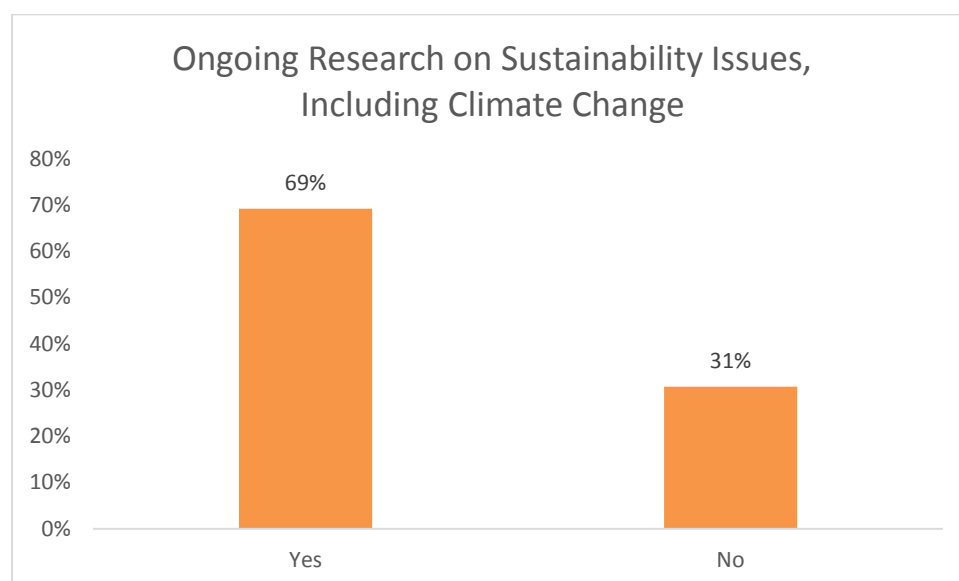
Company reports were indicated to the most preferred method by 23% of the respondents and this was followed by the use of engagement with investee company management at 8%. This indicates that at least 31% of the respondents considered the use of information directly sourced from the investee company to be valuable. The number could be higher since other asset managers could prefer to combine these methods with others as stated above. None of the respondents indicated that they consider brokerage reports or databases used in isolation to be the most useful source of climate change risk information.

Figure 9: Summary of results showing perceived most useful sources of climate change risk information



Whilst asset managers may from time to time use information on climate change risks that is sourced from various sources, there are some asset managers that may choose to consider climate change risks on an ongoing basis and even dedicate resources to this risk amongst other ESG risks. As shown in Figure 10, 69% of the respondents indicated that they do conduct ongoing research on sustainability issues with 31% indicating that they do not.

Figure 10: Summary of results showing if respondent firm conducts ongoing sustainability research



Ongoing research whilst being conducted by most asset managers does not imply that asset managers consider the use of a dedicated ESG in-house expert to be of importance. The perception, however, regarding the use of in-house expertise does serve to support indications regarding the importance placed on climate change risks by asset managers. This is despite a potential bias in that asset managers that do have dedicated in-house expertise were most likely to indicate that the resource was very important.

As shown in Table 4 below the mean rating given by the respondent regarding the importance of having in-house expertise on ESG issues was 2.46 with a standard deviation about the mean of 1.450.

Table 4: Summary of respondent perceptions on the importance of in-house ESG expertise

	N	Minimum	Maximum	Mean	Std. Deviation
Importance of In-house ESG Expertise	13	1	5	2.46	1.450
Valid N (listwise)	13				

Since the survey question only indicated the highest and lowest rating, of 1 and 5. The meanings for the ratings are assumed to be as follows:

1 - Very Important

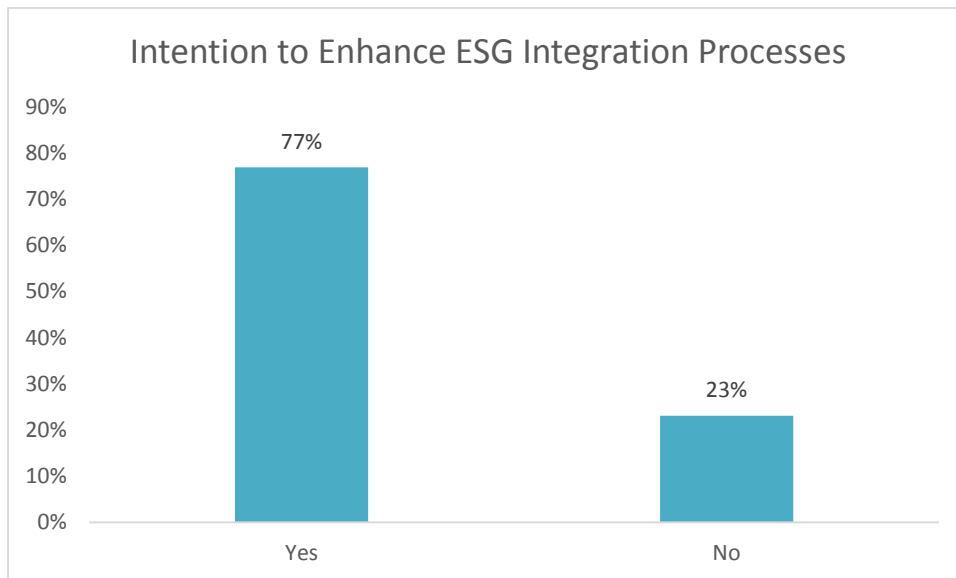
- 2 - Fairly Important
- 3 – Important
- 4 – Slightly Important
- 5 – Not Important at All

The mean rating of 2.46, therefore, indicates that on average respondents deem the In-House ESG expertise to have a level of importance that lies somewhere between Fairly Important and Important. Indicating that on average respondents considered in-house expertise to be important.

Some asset managers may be in the process of considering the integration of ESG issues, and may therefore not have fully considered these types of issues within their investment processes but there may be intentions within the firm to improve on existing processes. Others may be integrating but yet be keen to improve their processes. The indication of whether a firm has intentions to improve their ESG integration processes may therefore indicate one of two things, the level of satisfaction with regards to existing processes or the degree of importance that these issues have within their firm. As evidenced by Figure 11 below, 77% of the respondents indicated that there were intentions within their firm to improve ESG integration processes over the next 12 months, with 23% indicating that there was no intention to do so.

An interesting to note is the strong link between the respondents that conduct on-going research and those that indicated an intention to improve ESG integration processes. Of the respondents that indicated that they conduct ongoing research on climate change risks, 89% indicated that they had intentions to improve their processes. This implies that those that already are involved in researching the subject matter are also the same ones with improved process ambitions.

Figure 11: Summary of results regarding intentions to enhance ESG integration processes within the next 12 months

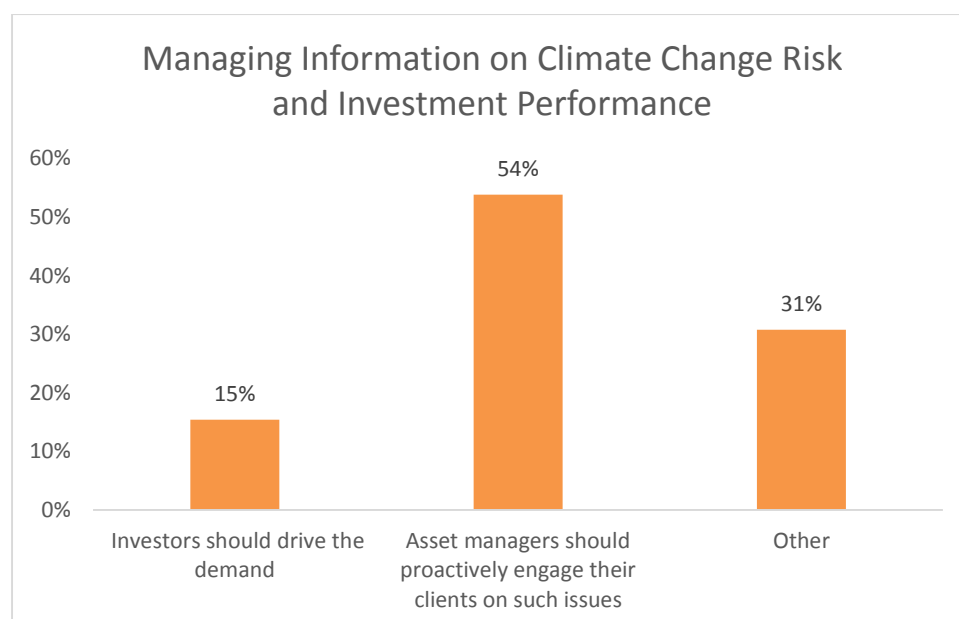


Despite, the small percentage of asset managers shown in Figure 8 as indicating that client demand is the most important driver to climate change risk integration, there is the issue of whether the flow of information regarding climate change risks should be driven by client demand or whether there should be a level of pro-activeness shown by asset managers when it comes to these issues.

Figure 12 below illustrates that, 54% of asset managers that responded to the survey indicated that instead of client demand for information driving the flow of information on climate change risks, asset managers should actively engage clients on these issues and be leaders in the debate. Only 15% indicated that they believe clients should drive demand for such information. What is notable is that 31% actually indicated that other drivers of the information flow exist.

Two asset managers actually indicated that a combination of client demand and proactive engagement by asset managers presented the most suitable approach, with one asset manager saying that *“Asset managers should present information such as foot printing, and asset owners should provide mandate.”* One asset manager indicated that climate change risks should be treated in the same manner as any other risks.

Figure 12: Summary of results showing perceptions on who should drive climate change risk information flow



4.3. The Barriers to Climate Change Risk Integration within Investment Portfolios

Asset managers either intending to integrate climate change risks within their portfolios or already integrating these risks face some potential barriers. The nature of these barriers and their level of significance to asset managers will determine whether the resultant effect is extremely low levels of integration or no integration at all.

The barriers to climate change risk integration can be perceived alongside each other with some barriers seeming more insignificant than others. Since these barriers are varied and asset managers may have differing views on what constitutes a significant barrier versus another, a ranked order scale was considered useful to identify some common perceptions.

The following two tables, Table 5 and Table 6 below represents the findings regarding the rankings of the perceived barriers to integration. The first table, Table 5, shows in the form of a frequency table, the total number of asset managers that provided that particular range of ranking and the percentage of the

total responses represented by that total. The final two columns show the number of responses that gave that barrier a ranking of less than 5 versus the number that gave the barrier a ranking of between 5 and 10.

As shown in Table 5, 50% of the respondents gave the barriers relating to a lack of generally accepted method of climate change risk integration, insufficient industry consensus on climate change risk significance, lack of demand from investors, perceived uncertainty on the long-term effects of climate change and short-term thinking, rankings that are below 5. This indicates a split between respondents regarding the importance of these barriers since the other 50% gave them a ranking of 5 and above relative to other factors.

Table 5: Summary of respondent rankings of barriers to climate change risk integration

Frequency Table of Grouped Rankings with respect to Barriers to Climate Change Risk Integration

	Ranking Group	Ranking Group	Ranking Group	Ranking Group	Ranking Group		
	1 to 2	3 to 4	5 to 6	7 to 8	9 to 10	<5	5 to 10
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Lack of a generally accepted method of climate change risk integration	3(25%)	3(25%)	1(8%)	3(25%)	2(17%)	6(50%)	6(50%)
Insufficient industry consensus on climate change risk significance	2(17%)	4(33%)	2(17%)	4(33%)	-	6(50%)	6(50%)
Lack of demand from investors	6(50%)	-	1(8%)	1(8%)	4(33%)	6(50%)	6(50%)
Insufficiency of information on climate change risks affecting investee companies	3(25%)	2(17%)	2(17%)	3(25%)	2(17%)	5(42%)	7(58%)
Difficulty in quantifying climate change risks	4(33%)	5 (42%)	1(8%)	1(8%)	1(8%)	9(75%)	3(25%)
Perceived uncertainty on the long-term effects that climate change could have on returns	4(33%)	2(17%)	2(17%)	3(25%)	1(8%)	6(50%)	6(50%)
Short-term thinking in the market which limits the ability to focus on extra-financial issues	1(8%)	5 (42%)	2(17%)	3(25%)	1(8%)	6(50%)	6(50%)
Lack of certainty regarding future policy frameworks	-	1(8%)	7(58%)	2(17%)	2(17%)	1(8%)	11(92%)
The view that other issues such as governance and social factors are more important	1(8%)	2(17%)	2(17%)	2(17%)	5 (42%)	3(25%)	9(75%)
Inadequacy of in-house expertise on climate change risk integration	-	-	4(33%)	2(17%)	7(58%)	-	12(100%)

For the barriers relating to information insufficiency, difficulty in quantifying climate change risks, uncertainty regarding regulatory frameworks, the perceived greater importance of other issues when compared to climate change and the inadequacy of in-house expertise on climate change risk integration, clearer views emerged. Table 5 reflects that 75% of the respondents gave the barrier relating to quantification of climate change risks a ranking of less than 5 with 25% giving it a ranking of 5 or more. This was the most significant indication regarding the barriers showing that the difficulty in quantifying climate change risk is a significant risk for most respondents. An interesting thing to note is that the barriers relating to a lack of generally method of climate change risk integration and that relating to a lack of demand from investors were the barriers that received the highest percentage of rankings of 1. The number of rankings at 1 for these barriers each represented 25% of respondents. This means that these barriers had the most number of respondents indicating them as the biggest barriers to

climate change. However there is a relationship between the barrier relating to the quantification of risk and that relating to a generally accepted method of integration. Since a generally accepted method of integration would include the quantification of climate change risk.

On the far end of the spectrum, Table 5 indicates that the perception that other factors, social and governance factors are important was ranked at 5 and above by 75% of the respondents. This showed a low level importance placed by asset managers on this barrier when it is compared to other barriers. Similarly, Table 5 reflects that the lack of regulatory certainty was ranked at 5 and above by 92% of the respondents, whilst every respondent ranked the inadequacy of in-house ESG expertise at 5 and above. These barriers when compared to other barriers are therefore indicated as being of lesser significance.

Table 6 below provides a breakdown of the average ranking given by the respondents for each barrier to climate change risk integration as well as the maximum and lowest rankings. The table also provides the standard deviation from the mean for each ranked item.

Table 6: Descriptive statistics summary for respondent rankings of barriers to integration

	N	Minimum	Maximum	Mean	Std. Deviation
A lack of a generally accepted method of climate change risk integration	12	1	10	5.00	3.247
Insufficient industry consensus on climate change risk significance	12	1	8	4.75	2.491
Lack of Demand from Investors	12	1	10	5.08	3.895
Insufficiency of information on climate change risks affecting investee companies	12	2	10	5.33	2.774

Difficulty in quantifying climate change risks	12	1	9	3.92	2.575
The perceived uncertainty on the long-term effects that climate change could have on returns	12	1	10	4.67	3.025
Short-term thinking in the market which limits the ability to focus on extra-financial issues	12	1	9	5.25	2.527
The lack of certainty regarding future policy frameworks	12	4	9	6.33	1.497
The view that other issues such as governance and social factors are more important	12	2	10	6.83	2.791
Inadequacy of in-house expertise on climate change risk integration	12	5	10	7.83	2.209
Valid N (listwise)	12				

The results indicate that the barrier that has the lowest mean was that pertaining to the difficulty experienced in quantifying climate change risks. This barrier has a mean of 3.92. This indicates that the average ranking of this barrier as a barrier to climate change risk integration was the highest. The inadequacy of in-house expertise on climate change had the highest mean, indicating that on average this barrier was ranked the lowest.

Some asset managers provided additional barriers to climate change risk integration within investment processes. The barriers highlighted by these asset managers referred to are cited below:

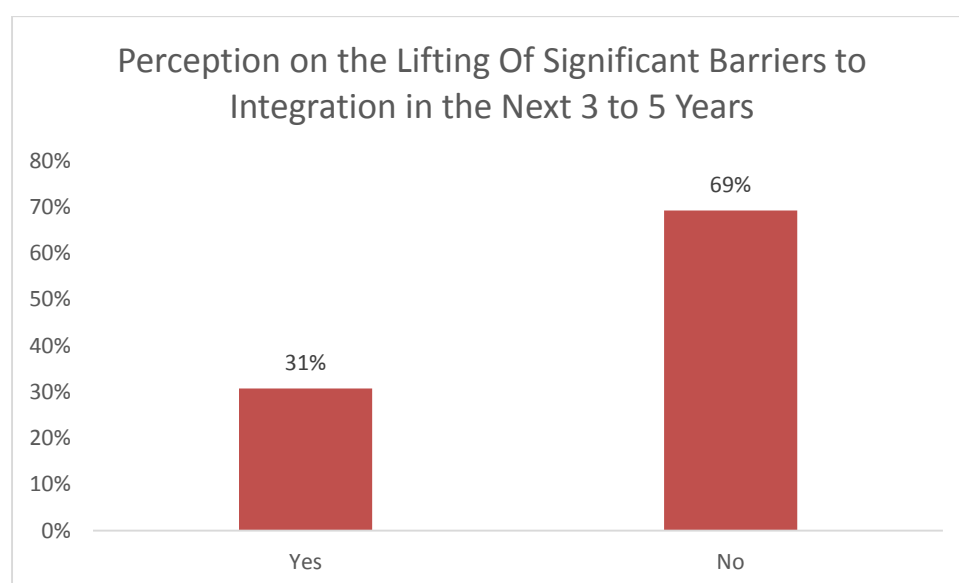
“Vested business interests from businesses which are foul to climate change but have significant capital and influence over authorities e.g., governments” (Asset Manager 2)

“Dislocation of interests, the long term nature of the problem with the true effects only to be felt in 10-15 years versus generating s-t returns” (Asset Manager 4)

The varied nature of the barriers to climate change risk integration is such that perceptions regarding whether a removal or abatement of the barrier will also vary across different barriers. However, an indication of whether asset managers believe that the biggest barrier to climate change risk integration will have lifted in the next 3 to 5 years contributes towards gauging the level of optimism with regards to climate change risk integration. Since an asset manager that is not optimistic about barriers lifting is less likely to be active at integrating such risks. The results however contradict this since as shown in Figure 13, 69% are not optimistic about the biggest barrier to climate change risk integration lifting. This shows that asset managers, consider climate change to be a significant risk, are integrating climate change risks to some degree but are very pessimistic regarding the barriers to integration.

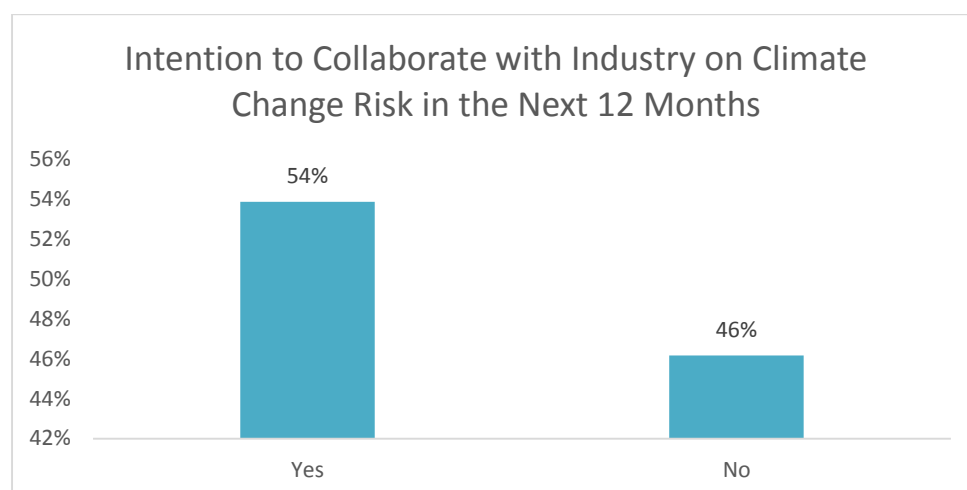
One asset manager that indicated lack of client demand as being the most significant barrier to climate change risk integration sent a comment indicating that they do not foresee a rise in investor demand for climate change risk integration within investment processes and that ESG overall has experienced keen interest by investors whilst climate change specifically has not.

Figure 13: Summary of results showing perceptions regarding the lifting of the biggest barrier to integration



In working against barriers to climate change risk integration, collaborative efforts on issues such as methods of measuring climate change risks could contribute towards industry solutions. The ability to share knowledge and methodology is not unique to the asset management industry with several industries doing so. There are bodies such as ASISA which facilitate knowledge sharing and the establishment of industry norms. It was therefore important to understand how asset managers perceive collaboration regarding ESG issues since that is how potentially knowledge can be shared. Figure 14 below shows the findings regarding asset manager intentions to collaborate in the near term.

Figure 14: Summary of results showing respondent intentions regarding collaboration in the next year



The indications of the respondents regarding collaboration in the next 12 months as shown in Figure 14 above were that 54% of the respondents did intend to do so whilst 46% did not. This near half-way split between the two groups indicates that the effect of collaborative efforts is not perceived as being significant. Its role in reducing barriers to climate change risk integration has not come fully to the fore.

Conclusion

The findings revealed some key issues that were useful for the purposes of addressing the research questions posed in the study. Asset managers that responded to the survey questions share a general understanding regarding what climate change is with the majority of them referring to it as a change in weather patterns. They further cite two key elements associated with the phenomenon, namely; atmospheric heating and pollution.

Most of the respondents perceive climate change to be a risk to the portfolios managed on behalf of third parties and they perceive this risk to be somewhat more than important. The majority of respondents also believe that climate will even become increasingly important to asset managers and that asset managers should be key players in driving information flow regarding this risk where it pertains to investment portfolios. Most asset managers also integrate this risk within their portfolios. However the extent of importance given to climate change risk varied and as did the manner in which this risk is integrated.

The majority of asset managers do not use screening and sustainability products in isolation as a form of climate change risk integration, preferring instead to use incorporation methods such as discounting, a combination of methods and other methods falling outside of the generic methodology. The findings also suggest that with regards to barriers to climate change risk integration, the measurability of climate change risks was on average ranked as a major barrier. Furthermore, it can be concluded that the resources sector is perceived to be the sector most affected by climate change risk, followed by the industrial sector. This is important since asset managers that choose to invest in a significantly vulnerable sector would probably need to have stronger awareness regarding climate change risks and deeper research conducted on climate change and methods of integration in order to adequately address this additional risk factor.

The asset managers that responded to the survey have a general willingness to conduct ongoing research and to improve ESG integration processes. This is indicative of a tendency to consider such risks, and whilst climate change might be one of several ESG risks considered, there is at least a rising awareness. Collaborative efforts, however, are still not considered key since only a small majority seemed keen to collaborate with other industry players in the next 12 months.

Climate change risks are on asset manager agendas, the challenge seems to be centered on how the integration of these risks should be done since the removal of barriers that exist such as those relating to measurability of this risk are so critical to this risk being integrated.

Chapter 5

Discussion and Conclusions

The aim of this study was to provide insight on South African asset manager perceptions on climate change risk integration within equity investment decision-making processes. In order to obtain this insight an online survey was conducted amongst South African asset managers that manage equity products. The survey was aimed at answering the research questions posed namely: 1) What is the perception of climate change risks within South Africa asset managers?, 2) How do South African Asset Managers integrate climate change risks into their equity investment processes?, 3) What are the barriers to integrating climate change risks into investment processes within the South African Asset Management Industry?.

This chapter will provide interpretations of the findings made in this study against the backdrop of the literature landscape. Thereafter conclusions drawn from the findings are presented highlighting key aspects that can be carried forward. The final section of the chapter details recommendations put forward by the researcher on the basis of the findings made in the thesis, including recommendations for future studies.

5.1 Asset Manager Perceptions on Climate Change

Based on the analysis of the findings, South African Asset Managers have a clear understanding of what climate change is since most of the respondents defined it as a change in weather patterns. The understanding of the causes of climate change pivoted around pollution and the release of carbon dioxide into the atmosphere which is in line with the scientifically defined causes, (Le Treut et al. 2007, cited in Mzenda and de Jongh 2011). The fact that asset managers are exposed to various forms of media and research various issues relating to the economy, geopolitics and governance means that many would in fact have come across some information on climate change. Hence there was an expectation that there would be some foundational understanding.

Asset Managers also have an understanding of the causes of climate change risk with a significant number of respondents having linked it to pollution or carbon dioxide emissions. However, because asset managers were not specifically asked to state the cause of climate change there were several others that did not mention this as the cause. Had they been asked to comment on climate change causes, a clearer view will probably have emerged and a stronger inference could be made.

The study's findings suggest that a significant number of asset managers consider climate change to be a risk to their portfolios. This illustrates that most of the asset managers consider climate change to be a long-term risk and that such consideration forms the basis of their perception of this risk within the context of the portfolios they manage. This could be an indication of a long-term outlook amongst the asset managers that responded to the survey. On the other hand it could indicate asset managers thinking about climate change by considering it from both short-term and a long-term view and determining the risks associated with it as having overall importance.

The nature of the risks posed by climate change was indicated to be mostly relating to carbon tax and increased regulations that would affect the companies that the respondents are invested in. This is in addition to the increased cost of doing business, which in essence is one of the results of increased regulation. The perception that regulatory risk is important with regards to climate change is in line with literature, (Labatt & White 2007; Investec Asset Management 2011). According to the literature, regulatory risk refers to risk associated with the degree to which changes in carbon policies could affect a company's financial performance. It has been suggested that within emerging markets regulatory risk relating to climate change has not been adequately addressed.

According to UK development finance institution, CDC Group's 2010 guidance document for emerging market fund managers entitled, 'Managing the growing risks from climate change', changes in regulation pose a risk in low income countries. They suggest whilst, regulation appears to be focused on high income countries, the scale of the carbon reductions needed means that low-income countries are likely to put restrictions on emissions as well. According to the organization it makes sense to prepare for future regulatory effects.

In South Africa there is the implementation of carbon tax is set to come into effect on the 1st of January 2016 in South Africa. According to the (Department of National Treasury 2013) Policy Paper on South Africa's proposed carbon tax, the tax that is proposed is a fuel input tax. The DEA would then approve the appropriate emissions factors and procedures using information published by the intergovernmental Panel on Climate Change. Carbon Emissions reductions can be conducted using emissions trading systems (ETS). ETSs involve the setting of a cap on the level of emissions allowable, (Department of National Treasury 2013). Companies are then allocated allowances that they can trade with other companies overtime, depending on their abatement costs.

Having noted the potential regulatory impacts of climate change as indicated by the respondents and in literature, the extent to which asset managers consider climate change to be important becomes important. The findings reveal that asset managers consider climate change being a little above important. (Eccles et al 2008, cited in Giamporcaro and Pretorius 2012) as mentioned in earlier chapters found that within the South African context environmental issues are not regarded as a major concern amongst socially responsible funds since the focus is on BEE and infrastructural issues. The findings in this study are therefore not entirely congruent with findings made by Eccles et al since this study's findings indicate some level of importance being placed on climate change issues.

The indication by asset managers as presented in the findings is that with regards to sector implications of climate change risk, resources companies are most at risk. The significance of the Resources sector's climate change risk exposure has been highlighted in literature by (Mzenda and de Jongh 2012). According to the authors, the resources sector particularly in South Africa is vulnerable to climate change risks as a result of its heavy dependency on coal generated energy. Further reasons for the resources sector being vulnerable to climate change risk are suggested by the (International Council on Mining and Metals 2013). The first relates to the sector's reliance of long term fixed assets means that design and planning decisions could leave mining sites. The resources sector is also reliant on long global supply chains makes the sector vulnerable in several locations.

Mining often takes place in challenging locations where there is a lack of capacity and infrastructure making it difficult for recovery from a climate change related incident to take place. Mining companies may also be working in communities that are also vulnerable to climate change risks relating to health, water resources and implications to the local agricultural sector. Furthermore a strong reliance on water to process makes the sector vulnerable.

5.2 Climate Change Risk Integration Methods of South African Asset Managers

The findings of the study reveal that South African Asset Managers do integrate climate change risks within their equity investment decision-making processes. However what is more telling is how the asset managers that do integrate these risks actually practically do so.

From the findings it can be determined that most asset managers do not use screening methods and sustainability products as a way of considering climate change risks but preferred a mainstream method was that of integrating the risk within equity valuation through the use of discounting as an example and other types of methods. Most respondents indicated that they use integration methods by applying discounting or other methods and that they use any other method other than the listed methods.

An example on how a method of incorporation using discounting in relation to ESG factors would work is provided in literature. (Bos 2014), suggests that according to this method, companies that score poorly on ESG issues would be deemed to have a relatively higher risk profile and would attract higher discount rates and result in a lower valuation. The opposite would apply for companies that perform well on ESG issues. The author suggests two other methods for ESG integration. The first is that of adjusting future cash flows of a company and the other involves the adjustment of target multiples such as a price to book multiple. In case of the method involving the adjustment of multiples, a premium would be placed on the target multiple of a company that scores highly on ESG issues and a discount would be placed on the multiple of the company that scores poorly, (Bos 2014).

A small group of respondents indicated that they prefer to use a combination of methods. This is understandable since some asset managers prefer to find an optimum method of considering climate change risk issues and their knowledge base on how best to integrate these risks may be still in the growth phase so exploring various ways of integrating the risk may be the safest approach.

The fact that a low percentage of the respondents indicated that they use screening, divestment and sustainability methods is indicative of the small size of South Africa's specialized responsible investing sector and that mainstream strategies are preferred. (Viviers et al 2009, cited in Giamporcaro and Pretorius 2012) found in 2006 that the South African SRI market accounted for 0.7% of total assets under management. The size of the sector may be linked to a lack demand by investors for asset managers to construct portfolios on the basis of ESG issues including climate change. This was suggested by (Eccles et al 2008).

The extent to which asset managers integrate climate change risks within portfolios was found to fall at mostly between 0 and 25% of portfolios. This can be interpreted to mean that whilst asset managers consider climate change risks to be important risks how the practical implications may tell a different story. The small percentage of assets subject to climate change risk integration may be subject also to the asset manager's perception of the question they were asked. It appears that asset managers responded to this question based not on a broad mainstream method of incorporation since this use of this method would have resulted in more than 50% of portfolios being subject to integration. The asset managers appear to have provided estimates related to time spent considering these issues and the extent to which practically integration is applied.

The findings also suggest that the perception amongst asset managers regarding the key motivation for integrating climate change risks relates mostly to the potential for an improved assessment of risk. The impact on long term returns is also regarded as a significant driver of climate change risk integration. The perception that improved assessment of risk is the biggest driver of climate change risk integration probably exists because risk is perceived to an important part of achieving superior returns, and anything that has an element of risk linked to it would be considered as important by asset

managers. The higher percentage of respondents indicating improved risk assessment as being the biggest driver of climate change risk integration relative to those indicating the impact on long-term returns as being most significant could mean that South African asset managers have not made a strong connection between climate change risk integration and the impact on long-term returns.

Interestingly, client demand was indicated as being the biggest driver of climate change risk integration by a small percentage of the respondents. This highlights the perception that perhaps clients need not be the drivers regarding climate change risk issues. This could also suggest that because the perception is that client demand for climate change risk integration is already decidedly low, there is no basis for asset managers to even deem it to be a driver. This contrasts literature on ESG issues where client demand was shown to be one of the biggest drivers on ESG integration, in an Investment Solutions Survey, (Sarkas 2014). However, the perception that return on investment is the biggest driver for ESG issues to be considered by investors, (Van der Ahee and Schulschenk 2013) is closely aligned to the results of this study since the two biggest drivers for climate change risk integration indicated in this study are risk and return related.

There is a growing awareness regarding the importance of having in-house expertise on ESG issues, including climate change. The findings reveal that most asset managers consider this role to be of value. However, the potential bias is that asset managers that have in-house expertise would most likely indicate that that these skills are important. One of the barriers to SRI cited in (Herringer et al 2009) relate to the lack of skills. The issue of skills that are specific to responsible investing including climate change risk will become increasingly important to asset managers as climate change issues and other sustainability issues rise in prominence. Most asset managers indicated that they do conduct ongoing research on sustainability issues. This research could either be conducted by the investment team or a specific member of the team whose responsibility is to consider ESG factors. As such, the extent to which issues such as climate change would vary according to the level of specialisation within the team on such issues.

There is also a general intention amongst asset managers to improve their ESG integration processes. This finding is indicative of an acknowledgement of the fact that current methods can be improved since the practice of mainstreaming responsible investing practices is still in its early stages. As better methods arise and industry consensus occurs more ways to integrate factors such as climate change will follow.

Asset managers need to source information on climate change risks from somewhere and the findings reveal that most asset managers prefer to use a combination of channels as a source of information. Current sources of information are varied in nature and the level of detail may also vary from one report to the next. There seems to be no clear consensus that one method is the best and this can be interpreted to imply a perceived void in consistent and deep information on climate change risks.

5.3 Perceived Barriers to Climate Change Risk Integration within Equity Investment Processes

The perception regarding the barriers to climate change risk integration are revealed by the findings. The lack of measurability of climate change risks is what comes through as a key barrier in that it is the barrier that received the highest rankings on average. Most of the respondents gave this barrier a ranking of less than 5, with 1 being the highest ranking.

A significant finding regarding the barriers to climate change risk integration relates to the barriers relating to the lack of generally accepted method of integration and the lack of investor demand having had the highest percentage of respondents ranking it as the biggest barrier to climate change risk integration. It can therefore be interpreted that where respondents perceived these barriers to be significant they perceived them as generally most significant of barriers. Whilst there was a split with regards to where these barriers rank, where respondents felt that they were important, there was great emphasis.

The barrier relating to the lack of in-house expertise on integration was given a low ranking by all the respondents. The perception that a lack of in-house expertise is not a significant barrier conflicts literature, (Herringer et al 2009). However the reason for this barrier being ranked lower can probably be attributed to the nature of ranking order scales. There were items that were perceived as being more important than a lack of in-house expertise but it cannot be said that in-house expertise is not important since other indications were that this is important. It can simply be interpreted that in comparison to other barriers in-house expertise is not important.

The study's findings also revealed a low level of optimism amongst South African Asset Managers regarding the lifting of the perceived most significant barriers to climate change risk integration with most respondents indicating that they were not expecting the barrier to abate in the next 3 to 5 years. This pessimistic view can be interpreted as asset managers perceiving the most significant barriers to climate change as being so entrenched and so lacking in efforts to remove the barrier that it could not have shifted in the next 3 to 5 years. In addition, climate change risk awareness has undergone a slow process of forming part of asset manager discourse, this could signal a hesitation regarding prioritising this issue, hence creating doubt that the barriers associated with will be easily removed. Since the barriers that were ranked as being the most significant over and above the difficulty in quantifying climate change risk, were those relating to a lack of generally accepted method of integration and a lack of investor demand, it can be interpreted that these barriers are generally not expected to lift.

5.4 Conclusions

The perception of South African Asset Managers is therefore that climate change risks are important to their businesses and particularly with regards to resources companies. These findings are in line with global studies conducted. The Institutional Investor (April 07, 2014) published a report aptly entitled "Climate Change and Years of Investing Dangerously". The Global Investor Survey on Climate Change which in its 3rd annual report commissioned by the GIC Networks in 2012 found that the majority of respondents viewed climate change risk as material across their portfolios.

It can also be said that South African Asset Managers do integrate climate change risks within equity investment decisions, but not to a significant extent and using methods other than screening, divestment and sustainability products. The biggest driver for integration being the perceived improved assessment of risk. The integration of climate change risk issues is supported by ongoing research conducted by asset managers either using personnel that is dedicated to these issues or other employees. The integration of climate change risks is expected to be important in the next 3 to 5 years and asset managers in the meantime are committed to improving whatever processes are in place. With regards to how information that informs integration processes is sourced the findings present clear insight. Most asset managers participating in the survey use a combination of sources to source climate change risk information, it can be concluded that a single consistent source that is generally accepted by asset managers on climate change risk is yet to be found.

The study revealed that the biggest perceived barrier to climate change issue relates to the difficulty in quantifying this risk. Other barriers that some asset managers feel strongly about when it comes to their significance relate to the lack of generally accepted method of integration and a lack of investor demand. The perception regarding the lack of measurability of climate change risk is one that can possibly be changed through effective industry discourse. Industry bodies such as the CFA institute at a global level can be one of the sources of information and locally bodies such as SAICA and universities could be a key contributors in providing a common understanding to graduates entering the investments field.

5.5 Recommendations

Since improved risk assessment is the biggest driver of climate change risk integration the increased focus on climate change as a risk and its inclusion with a broader portfolio risk management framework is recommended. Additional research on the risk element associated with climate change is recommended.

An industry discussion on the merits of the various methods of incorporation such as discounting needs to take place to drive robust debate and improve existing methodology. Industry bodies need to engage further on climate change risk issues and industry publications need to include in-depth educational

aspect with regards to how climate change risks can be incorporated. It is further recommended that university syllabi includes content on climate change risk integration to increase awareness amongst graduates entering the industry and to encourage the mainstreaming of the thinking around climate change risks.

Since the findings of the study indicated a lack of intention to collaborate on sustainability issues, perhaps more needs to be done to sell the uses of collaborative efforts within the industry. As such, again industry bodies such as the UNPR can get involved in “marketing” the usefulness of collaboration and identifying the problems associated with collaboration.

Regarding the small percentage of portfolios subject to integration of climate change risks, the recommendation is that climate change risk is considered within the broader investment processes of firms and that an explicit step in the investment process be dedicated to this. Whilst asset managers indicated that they do explicitly integrate climate change risks it does not appear from the small percentage that is subject to integration, that this forms part of the overall processes. It is recommended that an increased drive within investment teams to raise the awareness and level of understanding regarding the long term impacts of climate change takes place.

The finding that difficulty in quantifying climate change risk is considered on average to be the most significant barrier to climate change prompts the recommendation that increased intensity of methodology discourse takes place. Active collaboration and sharing of information on best practice through bodies such as the UNPR needs to form is recommended. This sharing of information ought to happen on a regular basis through regular reports on climate change risk quantification progress that is being made. The industry should also agree on what are the minimum information requirements that would enable adequate quantification of climate change risks with the aim of creating quantification framework.

Future research efforts could focus on the various methods applied in incorporating climate change risk by mainstream investors. An example of such method is discount factor utilisation. The methods could

then be compared against each other. Related studies could also relate to a comparison of investment returns over specific periods across the different methods of ESG integration and then looking specifically at climate change risk.

Furthermore, future research efforts could entail an investigation into perceptions regarding information requirements of South African Asset Managers with regards to climate Change Risk. Efforts could also be made to identify and research South African best practice cases of asset manager integration of climate change risks with investment portfolios. This would lead to an improvement in the consistency of information across various sources since currently asset managers rely on a combination of sources for information.

This study focused on equity as an asset class and future studies could look at how climate change risks are considered within other asset classes in South Africa or within multi-asset portfolios.

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Appendix A

Questionnaire

Section A: Climate Change Risk Perceptions

1. What is your understanding of climate change?
2. Does climate change pose any risk to the portfolios that you manage on behalf of your clients?
3. If you answered 'yes' to item 2 above, then, please provide a brief description of the nature of risks faced.
4. On a scale of 1 to 5, rate the level of importance of climate change to your firm, 1 being 'very important' and 5 being 'not important at all'.
5. Which of the following industries do you consider to be most affected by climate change (Please select one)
 - a) *Basic Materials*
 - b) *Oil and Gas*
 - c) *Industrials*
 - d) *Consumer Goods*
 - e) *Healthcare*
 - f) *Consumer Services*
 - g) *Telecommunications*
 - h) *Technology*
 - i) *Financials*
 - j) *Utilities*

Section B: Climate Change Risks are Integration into Investment Processes

6. Does your firm explicitly consider climate change risks as part of the equity investment process within some of your portfolios?

7. If you answered 'yes' to item 1 above, then, which of the following best describes manner in which climate change risk is considered?
- a) *Sustainability themed investment products are offered*
 - b) *Divestment from highly exposed companies*
 - c) *Application of positive or negative screens*
 - d) *Incorporation of climate change risk into valuation using discounting or other methods*
 - e) *Use of a combination of methods*
 - f) *Other, please specify*
8. What percentage of your equity portfolios is subject to the consideration of climate change risks?
- a) *Less than 10%*
 - b) *10 – 25%*
 - c) *25 – 50%*
 - d) *More than 50%*
9. If you do not explicitly consider climate change risks, please provide some background.
10. Do you think that climate change risk will become a key risk for explicit consideration by South African Asset Managers in the next 3 to 5 years?
11. Which of the following do you consider to be the biggest driver for climate change risk integration within investment processes?
- a) *Enhanced firm reputation*
 - b) *Impact on long-term performance of portfolios*
 - c) *Improved assessment of risk*
 - d) *Improved assessment of investee company management*
 - e) *Client demand*
 - f) *Other, please specify*
12. Which of the following do you consider to be most useful in providing climate change risk information? Please select one.
- a) *Brokerage Reports*
 - b) *Investee Company Management Engagement*
 - c) *Company Reports*
 - d) *Databases such as the Carbon Disclosure Project*
 - e) *A combination of the above-mentioned channels*

f) *Other, please specify*

13. Does your firm conduct ongoing research on sustainability issues including climate change?
14. Does your firm have intentions to begin or enhance ESG integration processes including the consideration of climate change risks over the next 12 months?
15. Which of these best describes how information on the impact of climate change on investment performance should be managed? Please select one.
- a) *Investors should drive the demand*
- b) *Asset managers should proactively engage their clients on such issues*
- c) *Other, please specify*
16. On a scale of 1 to 5, rate the importance of having in-house expertise on ESG issues including climate change risks, 1 being 'very important' and 5 being 'not important at all'.

Section C: Barriers to Climate Change Risk Integration

17. On a scale of 1 to 10, rank the following items according to the extent to which they limit the integration of climate change risks into equity investment processes, 1 being the highest ranking and 10 being the lowest ranking.
1. *A lack of a generally accepted method of climate change risk integration*
 2. *Insufficient industry consensus on climate change risk significance*
 3. *A lack of demand from investors*
 4. *Insufficiency of information on climate change risks affecting investee companies*
 5. *Difficulty in quantifying climate change risks*
 6. *The perceived uncertainty on the long-term effects that climate change could have on returns*
 7. *Short-term thinking in the market which limits the ability to focus on extra-financial issues*
 8. *The lack of certainty regarding future policy frameworks*
 9. *The view that other issues such as governance and social factors are more important*
 10. *Inadequacy of in-house expertise on climate change risk integration*
18. If applicable, please elaborate on any other barrier to climate change risk integration that you deem to be significant.

19. Does your firm believe that in the next 3 to 5 years the most significant barrier to climate change risk integration will have abated?
20. Does your firm intend to collaborate with other asset managers, industry players or groups on climate change risks during the next 12 months?